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IN THE

Supreme Court of the United States

OCTOBER TERM, 1965

No. 1092

UNIVERSAL MARION CORPORATION,

Petitioner,

vs.

THE WARNER & SWASEY COMPANY, et al.,

Respondents.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

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Respondents.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

Petitioner, Universal Marion Corporation, prays that a Writ of Certiorari issue to review the judgment of the United States Court of Appeals for the Tenth Circuit in the above-entitled patent infringement action.*

Opinions Below

The Opinion of the Court of Appeals is reported at 354 F. 2d 541 and is reprinted at pages 2a-9a.** The opinion of the District Court of Colorado is reported at 237 F. Supp. 719 and is reprinted at pages 11a-63a.

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* The respondents are: The Warner & Swasey Company; Ray Ferwerda; Sophia Louise Ferwerda, individually and as Guardian for Frederick Martin Ferwerda; Alice Rose Olsen; Sophia Louise Rebell; Raymond Koop Ferwerda; and Frederick Martin Ferwerda; by his Guardian Sophia Louise Ferwerda.

** References to the Appendix filed herewith are by page number followed by the letter "a".

Jurisdiction

The judgment of the Court of Appeals was entered on December 30, 1965 (p. 10a). The jurisdiction of this Court is invoked pursuant to 28 U. S. C. Sec. 1254(1). The basis of jurisdiction in the District Court was 28 U. S. C. Sec. 1338(a) and Sec. 1400(b).

The Questions Presented

I. Are the legal criteria expressed by this Court in 1877 in *Elizabeth* v. *Pavement Co.*[1] for distinguishing an invalidating prior public use defense from a non-invalidating experimental use appropriate today for determining whether an admittedly nonsecretive, commercial exploitation of an invention more than one year prior to the filing of an application for patent should come within a judicially-created non-statutory exception to 35 U. S. C. § 102(b) which exception is contrary to express public policy forbidding patent monopolies except for "limited Times"?

II. Is the provision of 35 U. S. C. § 282 relating to the presumption of validity of a patent applicable to an affirmative defense attacking the validity on matters not examined by the Patent Office?

Constitutional Provisions and Statutes Involved

This case involves Article I, Section 8, Clause 8 of the Constitution and Sections 102(b) and 282 of Title 35 of the United States Code. These provisions are set forth at page 1a.

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[1] 97 U. S. 126 (1877).

Statement of Facts

The petitioner, Universal Marion Corporation, at the time of the filing of this action was engaged in the manufacture of a hydraulically operated earth moving machine known as the "Grademaster" used in digging ditches, sloping trenches and the like. It is this Grademaster machine which is alleged by respondents to infringe claims 6, 7, 8, 9 and 16 of Patent No. 2,541,045.

The respondent, Ray Ferwerda and his now deceased brother, Koop Ferwerda, are the patentees of the patent. They filed their application for patent on May 15, 1944 and the patent was subsequently granted on February 13, 1951. The patent will not expire until February 13, 1968. In 1946, the Ferwerda brothers granted the respondent, The Warner & Swasey Company, an exclusive license under their then pending patent application to make, use and sell machines which were the subject of the application and any patent issuing thereon.

The machine described in the patent and as shown in Fig. 1 of the patent, reproduced at page 67a, is an earth moving machine which has a movable telescoping boom on the free end of which different implements, such as a scraper blade or bucket, may be mounted in order that the machine may be used for sloping trenches, digging ditches, etc. The boom is pivotally carried near one of its ends on a turntable which is mounted on a truck body. Rotation of the turntable swings or slues the boom in a horizontal plane and movement of the boom about its pivot raises and lowers the free end of the boom in a vertical plane. The boom is also mounted for rotation about its own longitudinal axis and includes an extensible section telescopically received within a base section. The implement for performing working operations is carried at the free end of the boom and pivotally attached for movement relative to the end of the boom in a hinge-like manner.

The movements of the boom plus the hinge movement of the implement together give the implement five degrees of movement: (1) swinging in a horizontal plane, (2) raising and lowering in a vertical plane, (3) rotation about the longitudinal axis of the boom, (4) extension and retraction with the free end of the boom, and (5) pivoting on the end of the boom. Structure is described in the patent for effectuating all of the movements.

All the claims in suit describe the machine as a combination of elements wherein each element is defined in broad terms. For example, see claim 6 (p. 68a).

In 1943, the Ferwerda brothers owned a contracting company which together with other contracting companies was engaged in the construction for the United States Government of the Ravenna Munitions Arsenal at Ravenna, Ohio. Among the machines used by the Ferwerdas at this project was a hydraulically operated earth moving machine that would later be called by the Ferwerda brothers as the "Gradall" machine. The machine used at Ravenna is pictured at page 69a. Petitioners assert that the use of this machine at Ravenna was a prior public use of the invention under 35 U. S. C. § 102 (b) while respondents assert that the use was experimental and thus not a defense under the statute.

The Ravenna machine is described in a mimeographed statement (pp. 70a-71a) distributed by the Ferdwerda brothers long before this action arose as being put to work in 1943 "as soon as the frost disappeared" which was "In the middle of March . . . ". This statement goes on to state that other contractors, engineers, and inspectors who visited the project had complimented the Ferwerdas on the machine and the quality of the work which it performed, and concludes by stating that if the ". . . Gradall had not been there, it would have been impossible to complete that project during that period." The statement contains no mention or suggestion that the machine was operated for

any test purposes or for any purpose other than for completing the project.

Only *two* changes were made to the machine during the time it was operated at the Ravenna project. Specifically, a brace was added ". . . in order to make the structure more solid" (R 157)*, and the position of the hydraulic lifting cylinder used to raise and lower the boom as shown on the top of the machine at page 69a, was changed in order to reduce the overall height of the machine (R 158). Neither of these changes is described in the patent claims.

This very same Ravenna machine was further used after the grading project at Ravenna was completed on other contracted grading projects in Pennsylvania without any further change being made to its structure (p. 65a).

In contrast to the plain import of the mimeographed statement that the Ravenna machine was successful and performed its job satisfactorily, Mr. Ray Ferwerda testified much later at the trial that "we found this [Ravenna] machine not satisfactory or marketable, we started to think, and we re-engineered a different machine, which we thought was better" and that it took approximately six months to re-engineer the machine (p. 64a).

It is this re-engineered machine which is pictured in the patent and at page 67a. The re-engineering resulted in only minor mechanical changes.

After re-engineering the machine, the Ferwerda brothers then waited until May 15, 1944 before filing their application for patent which was more than a year after they had first used the Ravenna machine on the construction project at the Ravenna Munitions Arsenal.

The District Court, as affirmed by the Court of Appeals, found that the operation of the Ravenna machine was a

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* References to the printed Transcript of Record are by the letter "R" followed by the page number.

"limited use" of the "invention" more than a year prior to the filing of the application for patent although it concluded that such use was experimental (p. 44a).

Reasons for Granting the Writ

As to Question One

This Court has recently stated with regard to the Patent Act that:

> "Within the limits of the constitutional grant, the Congress may, of course, implement the stated purpose of the Framers by selecting the policy which in its judgment best effectuates the constitutional aim."[2]

The purpose of the framers as appears in Article I, Section 8, Clause 8, of the Constitution is that:

> "The Congress shall have the Power . . .
>
> . . . . .
>
> To promote the Progress of Science and the Arts, by securing for *limited Times* to . . . Inventors, the exclusive Right to their . . . Discoveries . . ."(Emphasis added.)

Congress in implementing the purpose of the framers enacted 35 U. S. C. § 102(b) which is quite specific. It provides:

> "A person shall be entitled to a patent unless . . . (b) the invention was . . . in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, . . ."

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[2] Graham v. John Deere Co., —— U. S. —— (February 21, 1966).

Prior use prohibitions have been continuously included in the patent laws of this country since 1790.[3]

One of the more cogent reasons given for the inclusion of the prior use provisions in the patent statutes is that made by Mr. Justice Story in *Pennock* v. *Dialogue*, 27 U. S. 1 (1829). While the statement was with reference to the Patent Act of 1793, its reasonings hold true today with respect to the present Act. Mr. Justice Story stated:

> "We think, then the true meaning must be, not known or used by the public, before the application. And thus construed, there is much reason for the limitation thus imposed by the Act. While one great object was, by holding out a reasonable reward to inventors, and giving them an exclusive right to their inventions for a limited period, to stimulate the efforts of genius; the main object was 'to promote the prog-

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[3] The Patent Act of 1790, 1 Stat. 109, provided that a person was entitled to a patent if, among other things, his petition recited that the subject matter for which the patent was sought "was not before known or used".

The Patent Act of 1793, 1 Stat. 318, changed the requirement of prior use such that the petition had to recite that the subject matter of the patent was "not known or used before the application".

§ 6 of the Patent Act of 1836, 5 Stat. 117, for the first time made the absence of a prior "public" use a condition of patentability. It required that the subject matter to be patented by the inventor should not be "at the time of his application for patent, in public use or on sale, . . .".

§ 7 of the Patent Act of 1839, 5 Stat. 353, provided a grace period of two years prior to the filing of the application during which time the subject matter of the patent could be used without voiding the patent.

§ 24 of the Patent Act of 1870, 16 Stat. 198 (later § 4886 of the Revised Statutes), provided that a person might obtain a patent on his invention provided that it was "not in public use or on sale more than two years prior to his application . . .".

§ 1 of the Act of 1939, 53 Stat. 1212, reduced the grace period to one year which has been carried over to the present statute.

> ress of science and useful arts;' and this could be done best, by giving the public at large a right to make, construct, use and vend the thing invented, at as early a period as possible, having a due regard to the rights of the inventor. If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should, for a long period of years, retain the monopoly, and make and sell his invention publicly, and thus gather the whole profits of it, relying upon his superior skill and knowledge of the structure; and then, and then only, when the danger of competition should force him to secure the exclusive right, he should be allowed to take out a patent, and thus exclude the public from any further use than what should be derived under it, during his fourteen years; it would materially retard the progress of science and the useful arts, and give a premium to those who should be least prompt to communicate their discoveries" (p. 18).

Despite the specific language respecting the "public use" prohibitions contained in the various statutes, this Court created a judicial exception to the public use language when it stated in *Elizabeth* v. *Pavement Co., supra*, that "good faith" testing of an invention was not a public use even though the operation of the invention may have been nonsecretive. A number of guide lines are suggested in *Elizabeth* by which a "public use" may be distinguished from a nonsecretive use for experimental purposes. Among the guide lines mentioned are the "object and purpose" of the use that the inventor had in view, whether the object and purpose was corroborated by other witnesses, whether the actual use of the *invention* was a "good faith" testing of the *invention*, whether durability was a factor to be tested, whether the *invention* remained in the control of the inventor, and whether there was affirmative evidence

of an intent not to abandon rights in an invention such as by the filing of a caveat* with the Patent Office.

A number of these guides by their very nature are subjective and when applied to a particular set of facts, may result in different conclusions being reached by different courts. While this Court has applied the guide lines set out in *Elizabeth* strictly, the lower courts have not. In *every* case in which this Court has cited *Elizabeth* for the proposition that an experimental use is not necessarily a public use, it has found a prior public use invalidating a patent.[4] To the contrary, there are many lower court decisions holding patents valid where there has been proven prior nonsecretive use on the grounds that such use was experimental and thus within the holding of the *Elizabeth* case to the extent that *Elizabeth* has become a well-worn life preserver stretched to fill a variety of factual circumstances differing from those that existed in *Elizabeth.*[5]

In *Electric Battery Co.* v. *Shimadzu, supra,* at page 20, this Court stated, "Mere experimental use is not the public use defined by the Act, [citing *Elizabeth*], *but a single use for profit, not purposely hidden, is such.*" (Emphasis added.) thus indicating that there might be a still further objective commercial guide line which can be used in distinguishing a public use from an experimental use. That

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* A document ". . . praying protection of his [inventor's] right till he shall have matured his invention, . . ." Patent Act of 1836, 5 Stat. 117, § 12. Caveats were abolished by the Act of 1910, 36 Stat. 843, Chap. 414.

[4] *Egbert* v. *Lippmann,* 104 U. S. 333 (1881); *Smith & Griggs Mfg. Co.* v. *Sprague,* 123 U. S. 249 (1887); *International Tooth Crown Co.* v. *Gaylord,* 140 U. S. 55 (1891); *Root* v. *Third Avenue Railroad,* 146 U. S. 210 (1892); *Electric Battery Co.* v. *Shimadzu,* 307 U. S. 5 (1939).

[5] Of the approximately one hundred reported decisions citing *Elizabeth* for this proposition, more than one half have found excusable experimental use.

case is the last in which this Court has considered "public use".

Some Courts of Appeals recently have been applying a more objective test for ascertaining whether there was any commercial use, secretive or nonsecretive, of an invention, and, if finding that there was any competitive exploitation of the *invention*, holding it to act as a *forfeiture* of any patent rights under § 102(b). This approach is expressed by Judge Learned Hand in *Metallizing Engineer Co.* v. *Kenyon Bearing & A. P. Co.*, 153 F. 2d 516 (2 Cir. 1946), *cert. denied*, 328 U. S. 840 (1946). The Third Circuit Court of Appeals has also followed this approach and has specifically followed *Metallizing*. In *U. S. Chemical Corp.* v. *Plastics Glass Corp.*, 243 F. 2d 892 (3 Cir. 1957), *cert. denied*, 357 U. S. 836 (1957) that Court stated:

> "The issue is what is a public use or sale within the purview of the statute. This question was cogently discussed by Judge Learned Hand in the Metallizing Engineering Co. case, supra. We can add little of value to what Judge Hand said in the cited decision. We are in accord with what he stated. We sum up the application of the principle to the case at bar by saying that where, as here a patentee has used the process of a patent to create a product which has been sold on the market more than one year prior to the patent application, such use of the process and sales constitute 'prior use' within the meaning of Section 102(b), 35 U. S. C. *We are of the opinion that the patentee cannot avoid the impact of the statute by asserting that the sales were experimental to determine 'production controls'*, at least under the circumstances at bar. We cannot but conclude that the application of such a theory here would lead to an unwarranted extension of the patent monopoly." (p. 894, Emphasis added.)

The Sixth Court of Appeals has also followed this competitive exploitation approach.[6]

In the present case, there is no doubt that the invention of the patent was used more than a year prior to the filing of the application. The District Court so found. There is no doubt that the invention used was complete. The machine incorporating the invention performed the functions for which it was designed in that "if our Gradall had not been there [Ravenna], it would have been impossible to complete that project during that period" (p. 71a), and further, in that this same Ravenna machine was used on other grading projects without any further structural changes being made (p. 65a). There is no doubt that the use of the machine was nonsecretive. Other "contractors who visited the [Ravenna] project, complimented us on our machine and the quality of work performed" (p. 71a). There is no doubt that the inventors received monetary benefit from the use of their machine at Ravenna. The company which they owned had a contract to perform the grading operations (R 163).

Since the District Court did find a limited use of the invention more than one year prior to the filing of the patent application, the burden of going forward with the evidence should have shifted to respondents, requiring them to show by "full, unequivocal and convincing" evidence that such use was experimental, *Smith & Griggs Mfg. Co.* v. *Sprague, supra,* page 264. This respondents failed to do.

There *is* doubt as to the intent of the inventors in operating the machine at Ravenna and whether or not the operation was a "mere" experiment, *Electric Battery Co.* v. *Shimadzu, supra.* One inventor did testify twenty-one

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[6] *Huszar* v. *Cincinnati Chemical Works,* 172 F. 2d 6 (6 Cir. 1949).

years after the event that he tried the machine out at Ravenna. His testimony, unlike that of the inventor in the *Elizabeth* case, is not corroborated by any other witness. Such uncorroborated oral testimony made by an interested party many years after the event should, under the rationale expressed in *The Barbed Wire Patent*, 143 U. S. 275, 284 (1892), be given little weight in patent cases involving prior public use questions.

The District Court referred to changes made to the machine while at Ravenna and to the additional modifications made thereafter for supporting its holding that the use at Ravenna was experimental (p. 18a). If the changes and modifications are to be evidence in any sense that the prior use was for the purpose of experimentation, they must be of the type that change the character or operation of the earlier machine,[1] and be reflected in the *invention* defined by the claims of the patent subsequently applied for *after* the completion of the asserted experimentation. This they did not do and the District Court found the use of the machine at Ravenna was a use of the invention (p. 44a).

The District Court also referred to testimony by witnesses that a long period of time might be needed to test comparable machines (p. 18a). Such testimony is not directed to *the* machine as used at Ravenna and, more importantly, is not relevant to the invention defined in the claims. The invention as claimed, for example claim 6 (p. 68a), is to a combination of elements wherein each element is defined in broad terms. It does not take any extended period to test the function of the combination

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[1] *Smith & Griggs Mfg. Co.* v. *Sprague, supra; Eastman* v. *Mayor of City of New York*, 134 Fed. 844 (2 Cir. 1904); *Wendell* v. *American Laundry Machinery Co.*, 248 Fed. 698 (3 Cir. 1918); *National Biscuit Co.* v. *Crown Baking Co.*, 105 F. 2d 422, 427, 428 (1 Cir. 1939).

of elements as claimed. It may indeed be desirable to test the durability and strength of individual elements of a machine to obtain data on life expectancy, and it is expected that this type of testing would continue as long as a machine is in production.

> "That it was capable of improvement need not be denied, nor that, while it was in daily use, its owner and inventor watched it with the view of devising means to meet and overcome imperfections in its operation; but this much can be said in every such case. There are few machines, probably, which are not susceptible of further development and improvement, and the ingenuity of mechanics and inventors is commonly on the alert to discover defects and invent remedies. The alterations made in the machine in question, however useful, were not vital to its organization. Without them, it could and did work so as to be commercially successful." See *Smith & Griggs Mfg. Co. v. Sprague, supra,* page 265.

The District Court's findings in this case, as affirmed by the Court of Appeals, that the use of the machine at Ravenna was an experimental use of the invention rather than a public use fail to adhere to the guide lines for determining the judicial exception to public use as set out by this Court in the *Elizabeth* case, applied either strictly or liberally, or to the guide lines involved in any "competitive exploitation" test as advanced by the *Metallizing* case. The result is that respondents' patent is extended in time and petitioner as well as the public at large are prevented from using the invention at as early a period as possible.

The question of what is a "public use" is raised in many patent litigations and is believed next in importance to the question of obviousness in determining patentability of invention. This Court recently expressed its opinion re-

specting the latter,[8] and it is submitted that it should now do the same with respect to "public use" as the term is used in the Patent Act.

As to Question Two

The decision of both the Court of Appeals and the District Court misapplied the presumption of validity and the burden of proof provisions expressed in 35 U. S. C. § 282. Both courts have given the presumption of validity a substantive value which in some manner effectively increased the *degree* of proof required to invalidate a patent under the public use provisions of 35 U. S. C. § 102(b), and both courts have held that one attacking a patent does not even overcome this presumption of validity by establishing a prior nonsecretive use of the invention more than one year prior to the filing of an application for patent covering the invention. Specifically, the District Court found that "The defendant has failed to overcome the presumption of the patent's validity. . . . Defendant has sought to overcome the presumption of validity by attempting to show: that the patent was in 'public use' for more than one year prior to the application . . ." (pp. 43a-44a). The Court of Appeals affirmed (pp. 8a-9a).

This Court in discussing the presumption of validity to be given patents before the 1952 Act stated in *Mumm* v. *Decker & Sons*, 301 U. S. 168, 171 (1937) as follows:

> "For the grant of letters patent is *prima facie* evidence that the patentee is the *first inventor* of the device described in the letters patent and of its *novelty*. The issue of the patent is enough to show, *until the contrary appears*, that all the conditions under which a discovery is patentable in accordance with the statutes have been

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[8] *Graham* v. *John Deere Co.*, —— U. S. —— (February 21, 1966); *United States* v. *Adams*, —— U. S. —— (February 21, 1966).

met. Hence, the burden of proving want of novelty is upon him who avers it." (Emphasis added.)

Thus any substantive effect of the presumption of validity is restricted to matters examined by the Patent Office, namely the question of "first inventor" and "novelty", while procedurally the burden of proof of establishing invalidity with regard to all matters is placed upon the one attacking the patent. § 282 of the 1952 Patent Act has not changed this in any way as the declared intention of Congress in passing this section was to codify "the existing presumption of validity of patents".[9]

The District and Circuit Courts in the present case, however, have given the presumption of validity a substantive effect to matters not in any way *examined* by the Patent Office, namely prior use of the invention by the inventor, and have given this presumption undue weight throughout their consideration of the evidence regarding the nature of use of the invention.

Procedurally, the second sentence of § 282 places the burden of proof of prior public use on the one attacking the patent's validity. However, under *Smith & Griggs Mfg. Co.* v. *Sprague, supra,* this burden is completely met where a prior nonsecretive use of an invention within the prohibited period has been conclusively established. This condition has been met in this case as the District Court found a limited use of the invention during the prohibited period. At this point, the burden of going forward with the evidence should have shifted to the respondents if they are to avoid the effects of 35 U. S. C. § 102(b); and once shifted, the evidence presented to show that the use of the machine at Ravenna was a mere experiment must be full, unequivocal and convincing without regard to any presumption of validity. Where, as here, such evidence is not presented,

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[9] H. R. Rep. No. 1923, 82nd Cong. 2nd Sess. 29 (1952).

the patent must be held invalid under the provisions of § 102(b).

The presumption of validity and burden of proof provisions of § 282 involve important substantive and procedural considerations arising in substantially all patent litigations. It is submitted that the present case affords this Court an opportunity to correct the application made of § 282 by the District Court and the Court of Appeals and to make their own pronouncement as to the proper application of this section of the statute.

CONCLUSION

For the reasons stated, this Petition for Certiorari should be granted.

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APPENDIX
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APPEDIX A

Constitutional and Statutory Provisions

1. Article I, Section 8, Clause 8, of the Constitution provides:

> "The Congress shall have Power . . .
>
> . . . .
>
> To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries. . . ."

2. Sections 102(b) and 282 of the Patent Code of 1952 provide (35 U. S. C. §§ 102(b) and 282):

> "§ 102. CONDITIONS FOR PATENTABILITY NOVELTY AND LOSS OF RIGHT TO PATENT
>
> A person shall be entitled to a patent unless—
>
> . . . .
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, . . ."

> "§ 282. PRESUMPTION OF VALIDITY; DEFENSES
>
> A patent shall be presumed valid. The burden of establishing invalidity of a patent shall rest on a party asserting it. . . ."

APPENDIX B

Opinion of the Court of Appeals

UNITED STATES COURT OF APPEALS

FOR THE TENTH CIRCUIT

No. 7979

UNIVERSAL MARION CORPORATION,

Appellant,

vs.

THE WARNER & SWASEY COMPANY, et al.,

Appellees.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLORADO

(December 30, 1965)

Before PICKETT, LEWIS, and HILL, Circuit Judges.

PICKETT, Circuit Judge.

This is a patent infringement suit brought by Warner & Swasey Company, exclusive licensee of Patent No. 2,541,045, along with the owners of the patent, against Universal Marion Corporation, which manufactures and sells the accused machine. The defense was invalidity and non-infringement. It was alleged that the accused machine infringed Claims 2, 6, 7, 8, 9 and 16 of the patent. After an exhaustive discussion of the facts and the law relating thereto,[1] the trial court found the patent to be valid and all

[1] Warner & Swasey Co. v. Universal Marion Corp., 237 F. Supp. 719.

the aforesaid claims, except Claim 2, to be infringed by the "Grademaster" machine manufactured by the appellant, and entered judgment enjoining further infringement. On appeal, Universal Marion Corporation presents only the question of the validity of the patent. It contends that the patent is invalid for two reasons, (1) that the claims in suit did not define a patentable invention over the prior art, and (2) that the claims in suit are invalid because there had been a prior public use of the invention by the patentee more than one year prior to the filing of the application for a patent.

The machine disclosed by the patent is a multi-purpose material-moving device used principally in the construction and maintenance of roads, although its use is not limited to that purpose. It is designed for digging, loading and grading all kinds of surloading, scraping and grading all kinds of surfaces, including the sloping of banks of any grade and the movement of material at various angles. Many of the purposes for which the machine is used may be accomplished by single-purpose machines, such as shovels, bull-dozers, back hoes and draglines.[2]

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[2] The patent states the general purpose of the invention to be:

"This invention, as indicated, relates to a material moving apparatus. More particularly, it relates to a means of more expeditiously carrying out various operations wherein material is elevated and moved to a predetermined position or carried to a distant place of disposal. It is of particular utility for earth-working operations or for handling bulk material, such as sand, gravel, coal, snow, ashes, chemicals, minerals and other similar materials. The apparatus is in the nature of a universal earth-working machine adapted in a single unit to perform functions usually carried out by specialized types of apparatus, such as graders, bull-dozers, slopers, motor patrols, ditchers and the like. This is a continuation in part of our Patent 2,348,796, May 16, 1944."

Ray Ferwerda and his brother Koop were construction contractors, engaged in the earth-moving business, which included the finishing and repair of road grades. From their experience they perceived the need for a single multi-purpose apparatus which would do the work that was then performed by a variety of single-purpose machines and by hand labor. They were the first to devise a material-moving machine with a digging or scraping implement pivoted on the outer end of a rotatable, telescoping boom which could be extended or retracted by a hydraulic mechanism separate from the boom, but operatively connected with it and capable of handling heavy loads. The working tool so attached to the extensible section of the boom permitted a wrist-like movement and could be held in any desired position by the utilization of hydraulically controlled elements operating in pairs and adapted so as to be moved relatively to each other under various operative conditions.[3] A necessary rotating platform can be mounted on the average truck frame. It carries the entire boom assembly consisting of the metal boom cradle, engine and pumps, and an operator's cab, together with the hydraulic cylinders which control the movements of the boom. A turntable arrangement provides support for the rotating platform for the sluing, or swinging, of the boom on a horizontal plane. The trial court described the operation of the boom and the implement on the extended end, as follows:

"The machine employs a telescoping boom for supporting and operating an implement, such as a bucket.

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[3] The movement was described as being similar to that of the forearm, wrist and hand of a human arm. Combined with the boom mechanism, the wrist-like action was such that the load carrying implement could be independently (1) raised and lowered, (2) swung in a horizontal plane, (3) moved directly to and from the machine, (4) rotated about the line of extension and retraction, and (5) moved on an axis crosswise of the boom.

The telescoping feature enables the tool to be extended and retracted towards and away from the material to be worked upon. The boom may be oscillated about its axis so as to tilt the tool for working at various angles. The boom as a whole may be raised or lowered, and it may also be rotated by rotating the platform on which it is mounted. Means are also provided to give the tool what is called 'wrist action', a movement roughly akin to raising and lowering one's hand while bending at the wrist. All of these movements are accomplished by hydraulic means. The machine is thus capable of five distinct movements, which enable it to accomplish the various purposes for which it was constructed." *Warner & Swasey Co.* v. *Universal Marion Corp.*, 237 F. Supp. 719, 722.

The Ferwerdas completed their first machine in 1942, while on a road job near Cleveland, Ohio. This machine employed a rotatable telescopic boom concept as defined in the patent, but lacked many of the later features. Following an hour-long experimental application in the fall of 1942, the machine was returned to the shop for modification, after which it was again used for about an hour and a half and was still found to be unsatisfactory. During the winter of 1942-1943, additional changes were made, particularly in the type and support for the boom. The machine with the new boom arrangement was used on a construction project at Ravenna, Ohio, in March of 1943. The use of the machine on the Ravenna job extended up to mid-June of 1943; its actual use was for about six weeks. During this period it was discovered that many additional improvements would be necessary. In the fall of 1943, the machine was taken to a project in Pennsylvania where it was used "for a couple of weeks." No further use was made of this particular machine. During the next six

months it was completely re-engineered and re-designed. Production drawings were made of this last model, and the patent was applied for on May 15, 1944. Five machines of the design shown in the patent were made under the trade name of "Gradall" and offered for sale. Warner & Swasey acquired the exclusive rights to the patent early in 1946. Since it was first offered for sale on the market, the machine has been a commercial success.

In support of its contention that the claims of the patent in suit were invalid because they did not define an invention over the prior art, Universal Marion Corporation cites three former patents—United States Patents, Byrne No. 1,526,830, issued February 17, 1925; Wheeler Patent No. 1,987,982, issued January 15, 1935; and British Patent, Nixon, No. 2,958, accepted January 1, 1898. None of these patents disclose a material-moving machine which embodies a rotatable telescopic boom with the load-bearing implement on the outer end of the extensible section similar to that displayed in the patent. The machines defined in the Byrne, Wheeler and Nixon patents have an extension system with a tool or implement on the end of a piston rod which operates in and out of a hydraulic cylinder by which an extension or retraction of the piston rod may be accomplished. While movement of a piston rod in and out of a cylinder through a packing gland has some of the features of telescopic action and is subject to longitudinal rotation, these features do not correspond to the telescopic boom of the Ferwerda machine and do not teach its principle. The trial court found that an apparatus with a working tool on the end of a piston rod would not withstand the strain of heavy loads, while in the Ferwerda machine the weight and strain of the load was transmitted to the boom. The court stated that it was "satisfied from the testimony that the connection of a load bearing implement to the end of a piston rod, as

demonstrated by most of the prior art, will not accomplish the purposes of the Ferwerda invention." Warner & Swasey Co. v. Universal Marion Corp., supra, 237 F. Supp. at 729. There was testimony by an expert witness that the piston rod arrangement cannot function as a boom. Universal Marion's expert witness stated that he did not know of an earth-moving machine which used an implement attached to the end of a piston rod. As the term "boom" is used in the Ferwerda patent, it does not include a piston rod type of extensible section as described in the Byrne, Wheeler and Nixon patents, or any of the prior art referred to. There was ample evidence to sustain the trial court's finding that a piston rod will not function as a boom, as that term is used, in the patents before the court.

Regularly issued patents are presumed to be valid, and a party asserting invalidity on the ground of anticipation in the prior art, or for any other reason, has the burden of establishing such invalidity by clear and convincing evidence. 35 U. S. C. § 282; King-Seeley Thermos Co. v. Refrigerated Dispensers, Inc., 10 Cir., 354 F. 2d 533, and cases cited. We agree with the trial court that the piston rod concept of a material-moving machine does not teach the principle of the telescopic boom contemplated by the Ferwerda patent, and that the burden of proving invalidity has not been sustained.[4] Furthermore, as found by the

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[4] In discussing the tests for determining whether a patent is anticipated by the prior art, this court said in McCullough Tool Co. v. Well Surveys, Inc., 343 F. 2d 381, 398:

"In this connection, this court has held that the burden is upon the one asserting anticipation to sustain it by clear and convincing evidence and a patent is to be measured as anticipatory, not by what might be made out of it, but by what it clearly and definitely discloses. Mott Corporation v. Sunflower Industries, Inc., supra. [10 Cir., 314 F. 2d 872.] In order for

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trial court, the combination of elements in the Ferwerda machine has the requisite novelty of a true combination which constitutes an invention. Warner & Swasey Co. v. Universal Marion Corp., supra, 237 F. Supp. at 734-735. It solved a difficult problem and brought about a new result which workers in the art of material-moving machinery had been unable to accomplish. It added to the art something that was new and useful, which the trial court found was not obvious to one of ordinary skill in the art. 35 U. S. C. § 103; King-Seeley Thermos Co. v. Refrigerated Dispensers, Inc., supra.

35 U. S. C. § 102 provides that a person shall be entitled to a patent unless:

> "(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one

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a prior patent to anticipate an invention, it is necessary that all of the elements of the invention or their equivalents be found in one single structure or description, where they do substantially the same work in substantially the same way. Preformed Line Products Co. v. Fanner Mfg. Co., 6 Cir., 328 F. 2d 265, cert. denied 379 U. S. 846, 85 S. Ct. 56, 13 L. Ed. 2d 51. In order for a prior printed publication to anticipate an invention the description contained therein must disclose the complete and operative invention in such full, clear and exact terms as to enable any person skilled in the art to which it pertains to practice the invention to the same extent as he would be enabled to do if the information were derived from a prior patent. Eames v. Andrews, 122 U. S. 40, 7 S. Ct. 1073, 30 L. Ed. 1064; 40 Am. Jur., Patents, § 37, p. 554. In short, a printed publication is to be tested by the same rules as those applicable to a prior patent. 69 C. J. S. Patents § 41, p. 232. Anticipation is strictly a technical defense and unless all of the same elements are found in exactly the same situation and united in the same way to perform an identical function, there is no anticipation. National Lead Company v. Western Lead Products Company 9 Cir., 324 F. 2d 539; Stauffer v. Slenderella Systems of California, 9 Cir., 254 F. 2d 127."

year prior to the date of the application for a patent in the United States * * *."

It is contended that the use of the early Ferwerda machines constitutes a public use within the meaning of the statute. It is well settled that all uses do not necessarily constitute a public use. "Use by an inventor in good faith for the purpose of testing his apparatus or device for experimental purposes is not public use within the scope of the statute, even though incidental to such use he derives some financial return." Merrill v. Builders Ornamental Iron Co., 10 Cir., 197 F. 2d 16, 19. See also, McCullough Tool Co. v. Well Surveys, Inc., supra, 343 F. 2d at 393-394. The trial court found that the use of the machine more than one year prior to the application for patent was a good-faith use for experimental purposes and not a public use. 237 F. Supp. 724-725. The finding is sustained by the evidence and is not clearly erroneous.

Affirmed.

APPENDIX C

Judgment of Court of Appeals

UNITED STATES COURT OF APPEALS

FOR THE TENTH CIRCUIT

NOVEMBER TERM, 1965

No. 7979

UNIVERSAL MARION CORPORATION,

Appellant,

vs.

THE WARNER & SWASEY COMPANY, et al.,

Appellees.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

This cause came on to be heard on the transcript of the record from the United States District Court for the District of Colorado and was argued by counsel.

On consideration whereof, it is ordered and adjudged by this court that the judgment of the said district court in this cause be and the same is hereby affirmed.

December 30, 1965

APPENDIX D

Opinion of the District Court

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF COLORADO

FILED SEPTEMBER 18, 1964

No. 7805

THE WARNER & SWASEY COMPANY, et al.,
Plaintiffs,

vs.

UNIVERSAL MARION CORPORATION,
Defendant.

MEMORANDUM, OPINION AND ORDER

This is an action brought by the patentees[1] and the exclusive licensee of Patent No. 2,541,045 for infringement thereof. Plaintiff Warner Swasey is an Ohio Corporation, with its principal place of business in Cleveland, Ohio, engaged in the business, among other things, of manufacturing and selling certain earth moving equipment. As exclusive licensee under the patent in suit, it is the manufacturer of "Gradall" machines. Defendant Universal Marion Corporation is a Florida Corporation which has

[1] This group of individuals has been referred to as the "Ferwerda Group" through the litigation. It is composed of Ray Ferwerda, one of the patentees, and Sophia Louise Ferwerda, Alice Rose Olsen, Sophia Louise Rebell, Raymond Koop Ferwerda, and Frederick Martin Ferwerda, heirs of Koop Ferwerda, the other patentee of the patent in suit.

its executive offices at Jacksonville, Florida, and factories at St. Louis, Missouri and Marion, Ohio,[2] and makes and sells various types of earth moving equipment. Among its products is the "Grademaster" machine which is accused of infringement in this action.

At issue are claims 2, 6, 7, 8, 9 and 16 of the patent. Plaintiffs have alleged that these claims[3] are being infringed by defendant's Grademaster machine; defendant has alleged that the claims are invalid for a number of reasons, and further, that if the claims are valid, they are not infringed by the Grademaster. These six claims are, therefore, at issue both as to validity and infringement.

The patent in suit involves a material moving apparatus, which, as described in the patent, "* * * is in the nature of a universal earth-working machine adapted in a single unit to perform functions usually carried out by specialized types of apparatus, such as graders, bulldozers, slopers, motor patrols, ditchers and the like." It is said to be "* * * of particular utility for earth-working operations or for handling bulk materials, such as sand, gravel, coal, snow, ashes, chemicals, minerals and other similar materials."

The machine employs a telescoping boom for supporting and operating an implement, such as a bucket. The telescoping feature enables the tool to be extended and retracted towards and away from the material to be worked upon. The boom may be oscillated about its axis so as to

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[2] At the time this suit was brought, defendant had a place of business known as the Quick-Way Crane Shovel Company Division at Denver, Colorado, where it manufactured the Grademaster machine. This Division was acquired by defendant on June 9, 1961. At the present time, Grademasters are being manufactured in St. Louis, Missouri.

[3] Plaintiffs did not allege infringement of claim in their complaint. It was, however, brought into issue in the remaining pleadings both as to validity and infringement.

tilt the tool for working at various angles. The boom as a whole may be raised or lowered, and it may also be rotated by rotating the platform on which it is mounted. Means are also provided to give the tool what is called "wrist action", a movement roughly akin to raising and lowering one's hand while bending at the wrist. All of these movements are accomplished by hydraulic means. The machine is thus capable of five distinct movements, which enable it to accomplish the various purposes for which it was constructed.

The law by which this case is to be decided is well settled. There is no real dispute between the parties about it. As is usual with a patent case, the controversy arises out of the facts and the conclusions to be drawn therefrom. Following what has been said to be "the better practice," Sears, Roebuck & Co. v. Jones, 308 F. 2d 705, 706 (10th Cir. 1962), we first consider the issue of the validity of the patent.

I. VALIDITY OF THE PATENT

Defendant asserts that all of the claims at issue are invalid under 35 U. S. C. § 102(a), (b), (e) and (g) and for failure to meet the requirements of 35 U. S. C. § 103 and § 112.[4] Briefly put, defendant's assertions go to public use

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[4] The subsections of 35 U. S. C. § 102 relied on by defendant provide as follows:

"A person shall be entitled to a patent unless—

"(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the application for a patent, or

"(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or * * *

"(e) the invention was described in a patent granted on an application for patent by another filed in the United States

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of the invention for more than a year prior to application for patent, the machine represents only an aggregation of old elements disclosed in prior art, and the invention is not described with sufficient specificity and particularity.

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before the invention thereof by the application for patent, or * * *

"(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other."

35 U. S. C. § 103, entitled "Conditions for patentability; non-obvious subject matter," provides:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

35 U. S. C. § 112, entitled "Specification," provides:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

"The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

"An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

A. PUBLIC USE

The issue relating to public use is simply stated:

Was the invention in "public use • • • more than one year prior to the date of the application for patent in the United States"? 35 U. S. C. § 102(b). If it was, as the defendant contends, the Ferwerdas were not entitled to the patent.

The bulk of the evidence pertinent to this question is found in the response of plaintiff Ray Ferwerda to defendant's requests for admissions, his answers to interrogatories, and his live testimony at trial. The live testimony was either cumulative or complementary to the admissions and answers to interrogatories, and the Court finds no conflict in the testimony presented. The issue between the parties is the conclusion to be drawn from these facts.

Much of the testimony on this point concerned the technical details of the early Ferwerda machines that were built and tested prior to the time application was made for patent. Though it has been carefully reviewed by the Court, there is no reason to recite it here. In our view, the issue may be resolved on the basis of the testimony as it relates to the dates and duration of the early use, the degree of success and difficulties accompanying this use, and the necessity of testing a machine of the nature involved here.

In the fall of 1942, the Ferwerdas, who were at that time the sole owners of the Maple Heights Construction Company, built a machine, which appears to have been a prototype of the device[5] patented. Later that year, this ma-

[5] There is some mention in the live testimony of Mr. Ferwerda of a machine developed about 1940 which was the subject of a patent obtained by the Ferwerda brothers prior to that now in suit. Since defendant does not appear to argue that the testing of this machine constituted public use on the second patent, that evidence will not be considered here.

chine, which the Ferwerdas called a sloper, was tested for approximately one hour under the control of the Ferwerdas on a grading project on Ohio Route 306 on which the Maple Heights Construction Company had a subcontract. The machine proved unsatisfactory, and the Ferwerdas took it back to the shop for additional work. After removing a ten foot telescopic boom section, they again tested it on the same grading project for about one hour or one hour and a half. The machine's performance was still considered unsatisfactory, so the Ferwerdas again withdrew it from the project and did some more work on it.

At this time, they cut off the channel booms and put on a three point suspension, or triangular, boom. This machine was tried out on a Maple Heights Construction Company project at the Ravenna Arsenal in Ravenna, Ohio in the spring of 1943. The exact time that the machine was first used on this project is not clear from the evidence. However, it probably was in mid-March when the frost let up, since it was not powerful enough to work unless substantially all of the frost was out of the ground. In all, the machine was used over about a six-week period in Ravenna, during which time more innovations were made. For example, a brace was added to make the structure more solid and the lifting cylinder was repositioned to reduce its height.

The machine's performance on the Ravenna project was considered partially satisfactory by the brothers, though it was not operative about 25 percent of the time. The Ferwerdas, however, did not consider the design ready for final adoption. Consequently, they re-engineered it, a task which took about six months on paper. Production drawings were made of this model, which they considered to be completely redesigned and not similar to the former machines, and it was the design for which a patent was applied on May 15, 1944.

It is clear from the evidence that a machine constructed by the Ferwerdas was put in use more than a year prior to the time application was made for a patent. The question to be resolved is whether this use was a "public use" within the meaning of 35 U. S. C. § 102(b). In our view, it is resolved by the authorities which deal with testing and experimental use.

It is well settled that not all use is public use, especially when the use is experimental in nature. The law is well set out by Judge Bratton in Merrill v. Builders Ornamental Iron Co., 197 F. 2d 16, at pp. 18-19 (10th Cir. 1952).

> "But an inventor's use of his device or apparatus for experimental purposes is not public use within the intent and meaning of the statute. A use necessarily open to public view is not a public use in the sense of the statute, if it is made in good faith solely for the purpose of testing the qualities or operation of the invention. * * * The determinative factor is whether the use is made in good faith for purposes of experiment in testing the qualities and operation of the device or apparatus. [citing cases] * * * And use by an inventor in good faith for the purpose of testing his apparatus or device for experimental purposes is not public use within the scope of the statute even though incidental to such use he derives some financial return. Good faith use of an invention for such purpose is not changed in character merely by the receipt of incidental profit or gain."

The purpose of the rule appears to be to insure that the invention will be put into the public domain as soon as possible and to prevent the inventor from extending the number of assured profit years beyond that provided by the statute. See Ushakoff v. United States, 327 F. 2d 669,

672 (Ct. Cl. 1964). After full consideration of the evidence, the Court is of the opinion that the use here falls within the rule of the Merrill case and does not contravene the purpose of the statute.

The use of the machine in late 1942 was minimal. It was used on one occasion for about an hour, and, after important modifications had been made, on another occasion for about an hour and one-half. Use during this period was patently experimental, and, given the short duration of use, it clearly was not used for profit. Indeed, under the circumstances—the short time of use, the difficulties encountered, the size of the job and the time of the Ferwerda brothers—it would not be unreasonable to infer that its use during this period was actually unprofitable.

The use on the Ravenna project assumes the same character, even though it was used there for a comparatively much longer time. In view of the fact that there were on that project, between the Ferwerdas and associated contractors, about ten bulldozers, six scrapers and tractors, shovels and cranes and about twenty-five or thirty other pieces of equipment, it is most unlikely that the machine was intended to do the bulk of the work. Nor is there any evidence that the use of the machine was a factor bargained for in letting the contract to the Ferwerdas. Modifications were continually made during this period of use, and the experience obtained from the use led the inventors to make additional modifications thereafter. Moreover, as defendant's witnesses admitted, a much longer period than the six weeks spent on the Ravenna project " * * * could hardly be regarded as excessive for testing the function and utility of a rather complicated machine, newly conceived and newly constructed and for experimentation looking toward essential changes and adjustments." Long Mfg. Co. v. Holliday, 246 F. 2d 95, 102 (4th Cir. 1957). We find no difficulty in holding that the use of the machine prior to

May 15, 1943 "* * * may be properly characterized as substantially for the purposes of experiment." Smith & Griggs Mfg. Co. v. Sprague, 123 U. S. 249, 256, 8 S. Ct. 122, 126, 31 L. Ed. 141 (1887), "* * * made in good faith * * * in testing the qualities and operation of the device or apparatus." Merrill v. Builders Ornamental Iron Co., supra, 197 F. 2d at 19.

B. PRIOR ART

Before discussing the patent in suit, it might be useful to review the law pertinent to a determination of its validity. The principles to be applied are well settled, and with minor exceptions, which will be discussed at appropriate points, are not disputed by the parties. A recent case from this Circuit, Mott Corp. v. Sunflower Industries, Inc., 314 F. 2d 872 (10th Cir. 1963) contains an excellent summary of most of the principles applicable to this case, and we have chosen to rely on it for a statement of such principles. Other supporting authorities are abundant in Mott, and will not be repeated here.

A duly issued patent is presumed to be valid in all respects, and the burden of establishing its invalidity rests upon the party asserting such to show the same by clear and convincing evidence. The presumption is rebuttable, and the question of validity is therefore ultimately a question of law for the Court to decide. The elements requisite to validity are utility, novelty and invention.

As was true in Mott, we are not concerned here with the element of utility or usefulness, since the defendant has not raised the question. Moreover, we find the device described in the claims obviously useful within the meaning of the statute. The crucial issues relate to novelty, "or lack of anticipation by the prior art," and invention, "or

obviousness to one of ordinary skill in the related art." Mott Corp. v. Sunflower Industries, Inc., supra at pp. 877-878. Since some questions, such as whether prior art is analogous, are pertinent to both issues, the facts relating to both issues will be discussed together. The legal conclusions may be neatly categorized, but they rest essentially on the same broad factual basis, each issue to be resolved by reference to a different standard.

Novelty must be determined from the face of the patent, which is itself prima facie evidence of novelty. Whether prior art is analogous to the patent in suit is crucial to both issues. It is the broad factual basis for the resolution of the two different legal issues. We proceed first, therefore, to consider whether the prior art cited by defendant is analogous to the patent in suit. The test of analogy, as set out in Mott Corp. v. Sunflower Industries, Inc., supra at p. 878 is:

> "Whether arts or uses are analogous or non-analogous depends upon the similarity of their elements and purposes. If the elements and purposes in one art or use are related and similar to those in another art or use, and because and by reason of that relation and similarity, make an appeal to the mind of a person having mechanical skill and knowledge of the purposes of the other art, then such arts or uses are analogous. If the converse is true, then they are non-analogous. [citing cases]"

Claims 2, 6, 7, 8, 9 and 16[6] of the patent in suit are vigorously contested on the grounds of anticipation by

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[6] These claims, set out in full, are as follows:

"2. An apparatus of the character described having in combination a support, a rotatable platform on said support, a pair of standards on said platform, a vertically adjustable frame pivotally mounted on said standards, an axially rotatable main boom

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no less than seven prior patents. Of these, one, the Stauft patent, was expressly cited in the patent in suit and therefore strengthens the presumption of validity that attached to the patent merely by due issuance. Mott Corp. v. Sunflower Industries, Inc., 314 F. 2d 872, 877 (10th Cir. 1963); Admiral Corp. v. Zenith Radio Corp., 296 F. 2d 708 (10th Cir. 1961). A second patent, Wheeler, relied on by defendant as prior art, is the subject of dispute between the parties as to the standard by which it is to be judged. Plaintiff asserts that since it was cited in a prior Ferwerda patent that was co-pending at the time application was made for the patent now in suit, that it enjoys the same status as Stauft. Defendant, on the other hand, asserts that Wheeler was not considered by the patent examiner with respect to the patent now in suit and that

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section supported on said frame, means acting between said frame and said boom section for axially rotating the same, at least one extension boom section slidably mounted within said main boom section, a material moving implement carried at the free end of an extension boom section, and means acting between said main boom section and an extension boom section for projecting and retracting the same, and associated means for changing the angle of said implement with reference to its supporting boom extension section.

6. Apparatus comprising a base, a boom mounted on said base for sluing, mechanism for sluing said boom, said boom having a base section and an extensible section telescopically mounted on said base section, mechanism to extend and retract said extensible section, an implement attached to the free end of said extensible section and having a working edge, said base section having a transverse pivotal mounting, a mechanism for tilting said base section about said pivotal mounting, one of said boom sections having a fixed orientation relative to said implement working edge, said one boom section being mounted for oscillation about an axis extending longitudinally of said boom and mechanism for oscillating said one boom section.

7. Apparatus comprising a base, a boom mounted on said base for sluing, mechanism for sluing said boom, said boom having a

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the claims in suit have no presumption of validity whatsoever as against it.

Plaintiffs rely on Otto v. Koppers Co., Inc., 246 F. 2d 789 (4th Cir. 1957). There, the Court held (see p. 801) that even though a prior art reference contained in a co-pending application is not cited in the patent issued on the second application, the issued patent enjoys the same stronger presumption of validity that would attach if the prior art had been cited in the patent itself. Defendants distinguish the case, we think successfully, on the grounds that the co-pendency of the two applications here was only one day, the same examiners were not involved in the two applications, and each of the Ferwerda's applications resulted in a separate patent. These facts are in sharp contrast to Otto where the same examiner was involved in the

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base section and an extensible section telescopically mounted on said base section, mechanism to extend and retract said extensible section, an implement attached to the free end of said extensible section and having a working edge, said implement having a fixed orientation relative to the longitudinal axis of said extension section, said base section having a transverse pivotal mounting, mechanism for tilting said base section about said pivotal mounting, means mounting said base section for oscillation about an axis extending longitudinally on said boom, said extensible section being mounted non-oscillatably about said axis relative to said base section, and mechanism for oscillating said base section about said axis.

8. Apparatus comprising a base, a boom mounted on said base for sluing, mechanism for sluing said boom, said boom having a base section and an extensible section telescopically mounted on said base section, mechanism to extend and retract said extensible section, an implement attached to the free end of said extensible section and having a working edge, said implement having a mounting on said extensible section including a linear pivot extending crosswise of said boom, means for holding said implement in various positions about said pivot, said base section having a transverse pivotal mounting, mechanism for tilting said base section about said pivotal mounting, means mounting said base section for oscillation about an axis extending longitudinally

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proceedings for both applications and the resultant single patent was a "consolidation of several prior copending applications." It is not necessary to consider the scope of the Otto case here; we decide only that it is not applicable to the facts of this case.

Although we hold that Wheeler does not enjoy the status of prior art cited in a patent, we do not go so far as to agree with defendant that the presumption of validity of the patent does not stand as against prior art not cited therein. In our view, the presumption of validity may stand, to a degree, even as against uncited prior art. As stated in Mott Corp. v. Sunflower Industries, Inc., supra, 314 F. 2d at 877, "A duly issued patent is in all respects presumed to be valid, and *such presumption is strengthened in cases where the prior art relied upon to show invalidity*

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of said boom, said extensible section being mounted non-oscillatably about said axis relative to said base section, and mechanism for oscillating said base section about said axis.

9. Apparatus comprising a base, an annular track having a horizontal pivotal mounting on said base, a telescoping boom having a base section and an extensible section slidable longitudinally of said base section, said base section having an annular bearing in said track so arranged that said base section of said boom is held against longitudinal movement relative to said annular track, power means operatively connected between said base section of said boom for tilting said boom about said horizontal pivotal mounting, power means operatively connected between said base section and said annular track for oscillating said boom in said bearing about an axis longitudinal of said boom, mechanism operatively connected between said base section and said extensible section for extending and retracting said extensible section of said boom, and an implement attached to the free end of said extensible section in fixed orientation about the longitudinal axis of said extensible section.

16. An apparatus of the character described having in combination a support, a platform pivotally mounted on said support, hydraulic means for rotating said platform acting between said platform and said support and operative through an angle of

(Footnote continued on following page)

was before the Patent Office." (Emphasis added). See also Admiral Corp. v. Zenith Radio Corp., 296 F. 2d 708 (10th Cir. 1961) where the Court noted at p. 715, "* * * the failure to cite Andrews and Alexandersson as prior-art references *removes from the presumption of validity the strengthening support* which comes from consideration of such prior art by the Patent Office." (Emphasis added). When the prior art relied on has not been cited, the strength of the presumption is less than when the art has been cited, but the presumption does not completely disappear.

There is no dispute whether the remaining patents relied on by defendant as prior art were cited in the patent in suit. None of them was. It is clear, however, that they are not as pertinent as either Stauft or Wheeler, and they would appear to fall within the following illuminating observation made in Otto v. Koppers Co., Inc., supra, 246 F. 2d at p. 801:

> "Astute and enterprising attorneys can always find references not of record in the Patent Office, but if they do not involve some substantial element in the defense of anticipation which was not considered by the Patent Office, the failure to make them record references cannot weaken the statutory presumption."

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not less than 180 degrees of circular movement around its pivot, a telescoping boom comprising a base section and an extensible section, means mounting said base section on said platform for boom oscillation about an axis longitudinal of the boom, a horizontal pivot for said base section mounted on said platform, hydraulic means for tilting said base section about said horizontal pivot, hydraulic means for rotating said boom base section axially, hydraulic means for extending said extensible boom section, a material moving implement pivotally mounted on said extensible section, and means for moving said implement about its pivotal mounting."

If a Court had to give extensive consideration to every prior patent that had any element similar to the one in litigation, the years that are now consumed in such litigation would give way to decades, and the Courts would have time for little, if anything, else.

Plaintiffs contend, relying on the rule above cited, that Wheeler is of no significance because the Patent Office fully considered Stauft, which, plaintiff argues, not only encompasses all pertinent prior art, but also all the substantial elements of Wheeler. Defendant's expert, on the other hand, testified that Wheeler was the most pertinent of all. Though we are attracted to plaintiff's position, we find Wheeler pertinent enough to warrant independent consideration, and, in fact, we have chosen to give independent consideration to each of the patents relied on by defendants, though our discussion of all except Wheeler and Stauft will be somewhat abbreviated.

One issue common to most of the prior art cited by defendant can be best discussed before individual consideration of the patents. One of the elements most relied on by plaintiffs for the validity of their invention is the attachment of an implement capable of bearing heavy loads to the end of a rotatable telescoping boom. Most of the prior art relied on by defendant to show lack of novelty and invention of this particular feature deals with the attachment of various kinds of implements to the end of a piston rod, the cylinder assembly of which is rotatable. The issues relating to this feature are, therefore, whether the attachment of a load-bearing implement to a rotatable telescopic boom "* * * involves the presence of some element, or the new position of an old element in a combination, different from anything found in any prior structure," and whether the differences between it "* * * and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was

made to a person having ordinary skill in the art to which said subject matter pertains." Mott Corporation v. Sunflower Industries, Inc., supra, 314 F. 2d at 879.

Essential to the resolution of this issue is a definition of boom. After consideration of all the evidence in the record, we are disposed to adopt the definition proffered by plaintiffs' expert Nichols, whose testimony we have found inherently credible and persuasive. Moreover, we do not think his definition differs materially from those relied on by defendants.[7] The definition is as follows:

> "A boom is a load bearing structure. In my book, I define it as a heavy beam pivoted at one end and bearing loads at the other. I would like to redefine it to pivoted at or near one end, but in any case it

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[7] Defendants cite the following as additional definitions of booms:

"a) A structural member pivoted at one end which may carry a load at its other end and which may have in addition cables connected near to the load carrying end to help support that end. (Plaintiffs' expert Nicholas, Tr. 425 and as illustrated DxFF)"

"b) The boom as defined in *a* still operates as a boom when it is in a horizontal position and when the load carrying end is supported by cables C-1 which may extend between the load carrying end and a separate member. (Nichols, and as illustrated in DxGG)."

"c) A structural member which supports an implement at some distance away from an end that is pivoted or hinged to a support. (Nichols, Tr. 436)

"d) 'A structural member which supports an implement at some distance out from the supporting machine' (Defendant's expert Baron, Tr. 307) where a structural member is 'something that is designed to resist loads [or] to transmit loads.' (Tr. 308)"

An examination of the record references made in these definitions shows that definition *a* is the word of defendant's attorney, to which plaintiffs' expert Nichols assented; that definitions *b* and *c* represent composites of defendant's attorney's questions; and that definition *d* is a composite of the testimony of defendant's expert Baron.

is inherently a heavy structure capable of bearing loads * * *'' (Nichols, Tr. 375)

Considering this definition in the context of the function and purpose of the patent in suit, it is apparent that the loads intended to be borne at the end of the boom are heavy loads.[8] Thus, to reword the definition of the expert Nichols in the form we adopt, we may say that a boom is a heavy beam capable of bearing heavy loads which is pivoted at or near one end and bears heavy loads at the other. Defendants have attempted to make much of the fact that not all of the claimed purposes of the invention require heavy loads to be borne by the boom. Be that as it may, we may not ignore the fact that one of the principal functions asserted for the invention necessitates a heavy load burden. The fact that a machine built for heavy work can also do lighter work does not detract from those inventive principles which enable it to do the heavy work. The lesser may not negative the greater. Our scrutiny of the prior art will therefore be primarily directed to the question whether those principles which enable the patented machine to do heavy work constitute novelty and invention when contrasted with the prior art cited by defendant.

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[8] The first paragraph of the patent description, deleting the last sentence thereof, reads as follows:

"This invention, as indicated, relates to a material moving apparatus. More particularly, it relates to a means of more expeditiously carrying out various operations wherein material is elevated and moved to a pre-determined position or carried to a distant place of disposal. It is of particular utility for earth-working operations or for handling bulk material, such as sand, gravel, coal, snow, ashes, chemicals, minerals and other similar materials. The apparatus is in the nature of a universal earth-working machine adapted in a single unit to perform functions usually carried out by specialized types of apparatus such as graders, bull-dozers, slopers, motor patrols, ditchers and the like."

It is apparent from the whole of the evidence that the direct connection of the implement to the end of the extensible boom is not only of considerable significance, by virtue of the fact that the connection enables the strains exerted on the implement to be transmitted to the boom, but also constitutes novelty and invention, as those terms are used in patent law. The Court is satisfied from the testimony that the connection of a load bearing implement to the end of a piston rod, as demonstrated in most of the prior art, will not accomplish the purposes of the Ferwerda invention.

When an implement bears a load, it puts a strain on the mechanical element which supports it. In the case of a piston rod, the strain is exerted on the lower entrance into the cylinder, which has to be sealed against the loss of fluid. The strain exerted would not only tend to bend the piston rod, thus causing friction on its retraction into the cylinder, but would also tend to produce leakage of fluid from the cylinder by virtue of the strain exerted on its lower entrance and the wear produced by the movement of the piston rod when it is under that strain. Moreover, if the cylinder itself is placed under stress, it would tend to flatten, thus becoming smaller from top to bottom than from side to side, and resulting in additional difficulty in moving the piston through the cylinder. As the piston rod moves in and out with the load on the implement attached to its end, the points of pressure continually change the leverage causing chafing as the rod is withdrawn into or extended from the cylinder. The motion of the piston rod, under strain, creates a rubbing action on the parts which would tend not only to inhibit the movement of the piston rod within the cylinder, but to destroy the parts on which the rubbing of the piston rod occurs.

In short, it would appear that the connection of an implement to the end of a piston rod would not enable that

implement to withstand heavy loads. Indeed, as plaintiffs' expert testified, and defendant's expert conceded, there is no earth moving machine in existence with an earth moving tool supported at the end of a piston rod. The devices relied on by defendant do not teach the principle employed by the Ferwerdas for the mounting of the implement. In fact, the means employed in those devices appear to be impractical. The Wheeler machine, for example, was designed for shovelling, digging and boring. The means employed to accomplish those ends were, however, impractical, and it was suggested at trial that the only actual use it might bear would be digging in a sandpile for a short time. The success of the Ferwerda device in accomplishing the goals unsuccessfully sought by Wheeler[9] and others strongly suggests novelty. As stated in Williams Iron Works Co. v. Hughes Tool Co., 109 F. 2d 500 at p. 510 (10th Cir. 1940):

> "That others skilled in an art and working in a given field many times endeavored but failed to discover the principle and mode of operation of a new and useful improvement is strongly indicative that he, who thereafter discovered the principle of such improvement and designed a complete and operative device embodying such principle, did more than what would be obvious to a mechanic skilled in the art and that his conception resulted from the exercise of inventive genius."

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[9] Defendant argues in its brief that "There is absolutely no evidence as to what problem Wheeler was facing, or whether or not this supposed problem was solved or was not solved." It appears to the Court that Wheeler was at least concerned with developing a machine that could accomplish the tasks of "shovelling, digging and boring." Inasmuch as the testimony that Wheeler was incapable of performing these tasks was uncontradicted, it does not seem unreasonable to conclude that Wheeler did not accomplish the goals it sought to achieve.

Nor do we think that the Ferwerda innovation was one that "* * * would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. * * * Of course, obviousness, within the meaning of the statute, does not mean that one skilled in the art can perceive the solution after it has been found and pointed out by someone else, but the test is as of an earlier time, when the search is on for the solution to the problem." Mott Corp. v. Sunflower Industries, Inc., supra, 314 F. 2d at 879. One might say in retrospect that the mounting of a load bearing implement on an extensible boom is only a simple advancement over a mounting on a piston rod. "But simplicity is no bar to invention where, as here, the steps taken were not obvious to the ordinary mechanic skilled in the art." Mott Corp. v. Sunflower Industries, Inc., supra, 314 F. 2d at 880. In our opinion, the Ferwerda invention "* * * has substantially advanced the art." Oliver United Filters v. Silver, 206 F. 2d 658, 663 (10th Cir. 1953). The Ferwerdas took the final step that turned failure into success, and "in the law of patents it is the last step that wins." The Barbed Wire Patent, 143 U. S. 275, 283, 12 S. Ct. 443, 36 L. Ed. 154, cited in Oliver United Filters v. Silver, supra, 206 F. 2d at 667. This Court holds that the mounting of a load bearing implement on the end of an extensible boom constitutes both novelty and invention even in the face of the prior art relied on by defendant.

One additional argument of defendant relating to the issue of "booms v. piston rods" should be mentioned here. Defendants have argued that certain language from the case of Superior Separator Co. v. Ottawa Steel Products, 174 F. 2d 483 (10th Cir. 1949) shows that this Circuit has acknowledged that a structure comprised of elongated tubular cylinders and pistons may be called a boom. We may grant, *arguendo*, that this is true. We do not think,

however, that the label is binding here. In our view, it appears that the Court there accepted the label attached by the wording of the patent. Moreover, and more importantly, the issue we have discussed above was not before the Court there, and we do not think the case can be read to resolve it.

THE STAUFT PATENT

As noted above, Stauft was one of the patents expressly cited in the proceedings which led to the issuance of the patent in suit. It was, as a matter of fact, the basis for rejection of certain claims. As also previously noted, the presumption of validity that attaches to the patent by virtue of issuance is strengthened as against the claims of prior art cited in the patent. Stauft thus occupies a different position than the other patents relied on by defendant as prior art. It is proper to note, however, that our conclusions would be the same even if it did not enjoy that status.

The Stauft patent relates to "a new and improved Coke-Drawing Machine" designed to draw coke from the old beehive type of coke oven. The implement intended to accomplish this task, a scraper (to use defendant's terminology) or rake (to use plaintiffs' terminology), is connected to the end of a piston rod which extends and retracts within its cylinder assembly to move the implement in and out of the coke oven. The hydraulic cylinder assembly is so mounted that it may be turned about its longitudinal axis and pivoted about a horizontal axis by hydraulic means. The platform upon which the cylinder is mounted is in turn mounted on a carriage for rotation by hydraulic means.

It appears from defendant's brief that the only serious contention made regarding Stauft is with respect to the question whether a piston rod and cylinder assembly may be considered a boom as that word is used and construed in

the Ferwerda patent. The contention does not withstand scrutiny. Thus, although defendant's expert repeatedly referred to the cylinder assembly and the piston rod as a "boom," our discussion above makes clear that such a label is not proper in terms of the definition we have chosen to employ. The piston rod in Stauft is not a boom to which a load bearing implement may be connected, and the use of the piston rod there does not teach the use of a boom, as we have already held. Indeed, it would seem a reasonable construction of the proceedings before the Patent Office to imply that the Patent Office itself distinguished Stauft on this basis. In any event, our independent determination of the question leads to that result.

In view of defendant's position, it would not seem necessary to further distinguish Stauft. It may, however, be pointed out that Stauft does not have, nor does it teach, the use of mechanism or means acting between the main boom section and the extensible section to extend and retract the extensible section since the fluid which moves the piston rod in Stauft does not constitute a mechanism and is clearly not operatively connected between the base section and the extensible section for extending and retracting the extensible section of the boom.

Other elements of Stauft, such as the use of hydraulic means for sluing the cylinder, rotating the platform on which the cylinder is mounted, etc., will be considered in the section below relating to the issue of novelty of an aggregate of old elements in the patent in suit.

The Wheeler Patent

If battle lines were to be drawn about any specific prior art in this suit, they would have to be drawn about Wheeler. This patent became the focal point, in both testimony and briefs, of considerable discussion. As already noted, the

parties even disagreed as to whether it was cited, or could enjoy the status of cited art, in the patent in suit. We have chosen to consider it as if it had not been cited, except as to claim 2, which defendant apparently concedes to have been considered in light of Wheeler, albeit some two years before the claim was allowed. As against claim two, Wheeler may be considered as prior art cited.

As previously noted, we have resisted the temptation to consider our conclusions regarding Stauft as applicable to Wheeler. We have done this primarily because Stauft enjoys the status of prior art, while Wheeler does not, and, frankly because defendant has argued Wheeler so strenuously. To allude to an old farmyard principle, it is the squeaky wheel that gets the grease. We have given Wheeler independent consideration.

The Wheeler patent relates to a shovelling, digging and boring machine designed "for use in a mine or other place." As was true in Stauft, the implement in Wheeler, a shovel, is hingedly mounted on the end of a piston rod which extends and retracts within its cylinder assembly for movement towards and away from the work to be done. Also, like Stauft, the connection of the implement to the piston rod cannot be said to anticipate the connection of the implement in the Ferwerda patent to a boom. See especially the general discussion relating to booms vs. piston rods at pp. 728-731 and the reference made there to Wheeler at p. 730. Indeed, the reasons for distinguishing Wheeler on this basis would seem even stronger than in Stauft, since the loads that would be expected to be borne by the implement on Wheeler would be greater than those in Stauft because of the kind of work Wheeler was intended to do as contrasted with the work Stauft was designed to accomplish.

Also, like Stauft, the means utilized to retract and extend the piston rod in Wheeler is fluid acting within the cylinder behind the piston rod. Again, for the same rea-

sons as in Stauft, the fluid cannot be considered a mechanism, nor can it be said that it teaches the use of a mechanism acting between the main boom section and the extensible section to extend and retract the extensible section. Likewise, it is not operatively connected between the base section and the extensible section.

Defendant apparently concedes that Wheeler does not have the "associated means" of claim 2 of Ferwerda, the "fixed orientation" of claims 6, 7, and 9 or the "annular track" of claim 9, although defendant qualifies this concession by saying that if these claims are construed as plaintiff contends they should be, then they are within the contemplation of Wheeler. Since we have not construed all these claims in the broad sense defendant contends that plaintiffs have urged, we agree that Wheeler does not have or read on these particular claims. Finally we think the Ferwerda patent has both novelty and invention, as against the components of Wheeler, with respect to the means provided for moving the implement about its pivot as claimed in Claims 2, 8 and 16 and complemented by the specifications, especially column 2, lines 27-30, column 5, lines 49-54, column 6, lines 15-18, column 7, lines 4-6, and column 8, lines 43-46. See also figure 5, which is a diagrammatic view or schematic outline of the hydraulic control system. The claims and the specification may be read together, Harris v. National Machine Works, 171 F. 2d 85, 89 (10th Cir. 1948), and when so read, they clearly go far beyond the means provided in Wheeler, i.e., the spring, for "changing" or "moving" the implement and beyond the means provided in Wheeler, i.e., the arms, for holding the implement in various positions about the pivot.

In light of these distinctions, it is not necessary to go further here to discuss the means utilized in Wheeler for axial rotation, tilting of the cylinder assembly, and turntable rotation. These will be discussed below in the section regarding aggregation of old elements.

Opinion of the District Court.

THE GEORGELIS PATENT

The Georgelis patent relates to a "portable tree pruning or trimming machine." A rotary saw is journalled on a telescopic mast which may be extended or retracted to position the saw at the desired height. The mast may be oscillated by means of a manually operated hand crank not accessible to the operator from his operating position. The device is purely hand-operated.

Defendant does not appear to place much emphasis on this patent, and the Court is inclined to observe that it is far less persuasive than either Stauft or Wheeler. Its telescopic mast, which is not a load bearing structure and does not have a pivot hinge, is clearly not a boom, nor does it teach the use of a boom. The implement is not an earth moving implement, and the means for oscillation by the hand crank do not teach a means for oscillating a boom. Indeed, defendant's only serious contentions seem to be that Georgelis has the "fixed orientation" and "annular track" of the Ferwerda patent. However, defendant's own expert testified to the contrary as to both of these points, and the record is entirely devoid of evidence to support the contention.

THE LIEBMANN PATENT

The Liebmann patent relates to "fluid pressure operated shoveling machines." It is unnecessary to burden this opinion with a description of this impractical device. Having an implement connected to a piston rod, it is distinguishable on the basis described several times above. Essentially, only one hydraulic cylinder is employed to accomplish the motions of raising, lowering, and sluing the bucket, and for rotating what defendant alleges to be the boom. Moreover, the rotation and sluing are merely

dumping operations and do not correspond to or teach the elements of the Ferwerda patent. The fluid causing movement of the piston rod is not a mechanism. Indeed, it would appear from the two paragraphs devoted to Liebmann in the section of defendant's brief which relates to invalidity because of anticipation that the only real contention advanced as to the materiality of Liebmann is with respect to "fixed orientation." Again, defendant's expert testified that Liebmann did not have this element, and the contention is utterly without evidentiary support from the record.

THE NIXON PATENT

The Nixon Patent is a British patent which relates to a loading machine for coal, coke, ore or other material. Like Stauft and Wheeler, the implement in Nixon is mounted on the end of a piston rod, which turns the implement for dumping when extended at the outer end of its stroke. No independent mechanism is provided for this rotation of the piston rod, and there is no mechanism for extending the piston rod, that movement being accomplished by fluid in the cylinder. The patented structure has what could perhaps be called a boom, but the implement is not connected to the end of it, and it could not be said to teach the use of a boom for that purpose. The implement does not have a fixed orientation with respect to one of the boom sections, and there is no means for mounting the cylinder (which defendant's expert called a base section) for oscillation.

Defendant's contentions regarding Nixon are extremely general in nature. It argues that "* * * both Nixon and Moore have the same combination of elements called for in claim 6 and * * *. Nixon shows all of the movements called for in each of the claims in suit and both Nixon and Moore disclose many of the individual elements called

for in these claims." Though it is difficult to assess such general assertions, the contentions appear groundless as illustrated above.

THE MOORE PATENT

As shown above in the quotation from defendant's brief which relates to both Nixon and Moore, defendant's contentions relating to Moore are quite general, if not ephemeral, in nature. Moore relates to a mechanically operated power shovel, no hydraulic means being contemplated for any function of the machine. The implement is attached to a shaft which has no independent extensibility. We do not find it analogous to the Ferwerda Patent.

THE BYRNE PATENT

Reference is made in one sentence of defendant's brief to the Byrne Patent. Defendant's expert testified at trial, however, that it was not more pertinent than the art cited by the examiner during the prosecution of the patent in suit. Since defendant appears only to have alluded to it in passing, it will not be considered here.

C. AGGREGATION OR COMBINATION OF OLD ELEMENTS

Because we have held that not all of the elements of the Ferwerda patent constitute old elements, defendant's arguments relating to unpatentability because of aggregation are really inapposite. We have, however, chosen to discuss them.

At the outset, it should be noted that the Courts have observed a distinction between an aggregation of old elements and a combination of old elements. As distinguished in Great Atlantic & Pacific Tea Co. v. Supermarket Equip-

ment Corp., 340 U. S. 147, 151, 71 S. Ct. 127, 95 L. Ed. 162 (1950), the latter term is used to signify patentability of a mechanical device that brings old factors into cooperation, while the former connotes unpatentability of a device that brings old factors into cooperation for lack of invention. The starting point for such a determination is, of course, a finding that the patent in suit is composed of old elements. If such a finding is made, the combination patent should be scrutinized "* * * with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements." Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp., supra, at 152, 71 S. Ct. at 130.

The basic fact that makes this issue irrelevant to the instant case is that there is no finding here that the patent in suit is comprised of old factors into combination. We have, in fact, specifically held that the mounting of a load bearing implement to a rotatable telescopic boom constitutes both novelty, as against the prior art cited in the patent in suit and the uncited art relied on by defendant, and invention. In view of this finding, that at least one material and significant element of the patent in suit constitutes invention within the meaning of the statute, the issue must be resolved against defendant. However, even if we assume arguendo, that this feature does not constitute invention, we still think the issue must be resolved against defendant.

Excerpts from some of the leading cases in this Circuit on the question are set out below:

> "A mere aggregation of old elements is not patentable when the respective individual functions of the assembled elements are not changed and produce no result other than the added results of such functions. A combination of old elements is patentable if it accomplishes either a new result or an old result 'in a

more facile, economical, and efficient way in a particular environment which presented peculiar and difficult problems.'" Admiral Corp. v. Zenith Radio Corp., 296 F. 2d 708, 713 (10th Cir. 1961).

"When the respective individual functions of the elements assembled are not changed and where they produce no result other than the added results of such functions, there is a mere aggregation of elements.

"When the elements are so united that by their reciprocal influence upon each other or by their joint action on a common objective, they perform additional functions and accomplish additional results, the union is a true combination.

"The result must be due to the joint and cooperative action of all the elements, not a mere aggregation of the several results of the separate elements acting independently; it must be the product of the combination and not a mere aggregate of several results, each a complete product of one of the combined elements." Hutchinson Mfg. Co. v. Mayrach, 192 F. 2d 110, 112 (10th Cir. 1951).

In our view, the Ferwerda machine accomplishes more than the results of the functions of its old elements considered individually. In other words, to use the terminology of Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp. supra, 340 U. S. at 152, 71 S. Ct. at 130, the "* * * whole * * * exceeds the sum of its parts * * *." The patented machine is capable of performing grading, sloping and excavating functions that can be performed by no other type of machine, and it performs some of the functions of other machines "in a more facile, economical, and efficient way." The evidence of the witness Nichols was particularly persuasive in this regard.

As his testimony shows, the machine is not only able to perform its tasks under conditions which make it impossible for other machines to function, for example, in heavy mud adjacent to slopes that must be cut in grading operations, but it is able to perform tasks involving cutting of difficult angles on slopes, gutters, shoulders, etc., that formerly could be accomplished only by hand labor. In addition, it is apparent that the machine can accomplish in a much more efficient way, and with great precision, tasks which other machines could perform only with an operator of consummate skill in such a way that hand labor would be required to finish in order to achieve a satisfactory surface.

Also persuasive in this regard is the commercial success of the machine even in light of the fact that it is neither a fast working machine nor capable of bearing unusually heavy loads. Defendant concedes that the Gradall machine has enjoyed commercial success, but argues that it is due in large part to extensive advertising, which, of course, has nothing to do with patentability, and that, in all probability, the commercial success of the machine is due to certain features of the Gradall which are not contained in the Ferwerda patent claims. As to the first, there is no evidence that the expenditures of the Warner & Swasey Co. for advertising were in excess of those incurred by any other company in the business of manufacturing and selling earth moving machines; nor do the expenditures appear to be of such magnitude to make it appear that the construction industry was taken in by Madison Avenue rather than by the intrinsic appeal of the machine. As to the latter, it is sufficient to say that this issue goes to the question of damages, not to patentability. Indeed, as defendants have consistently argued, it is the claims of the patent that determine its validity, not the machine that is presumably built on the basis of the patent.

In short, it is our view that the Ferwerda patent, if all of its elements be considered old, constitutes a true combination of elements which is in itself patentable.

D. SPECIFICITY OF CLAIMS

We now come to the question of whether the claims are specific enough as to enable one skilled in the art to construct the machine. 35 U. S. C. § 112 requires that specification of the patent must describe the invention in "full, clear, concise, and exact terms as to enable any person skilled in the art" to construct the invention. The section further states that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

Defendant contends that neither the specification nor the claims are specific enough to meet these statutory requirements with regard to certain enumerated elements. Defendant's witness Baron repeatedly testified of difficulty in interpreting certain claim terminologies. In particular, the specification refers to a given item as a "sleeve" in one place and a "piston" in another; the "boom section" is referred to as "rearward boom section," "outer boom section", "non-sliding telescopic section," and "frame section." Defendant finds further difficulty with the term "vertically adjustable frame pivotally mounted on said standards" called for in claim two, and with the term "an annular track having a horizontal mounting on said base" called for in claim nine.

Essentially, defendant's objections of ambiguity take two forms. The first refers to allegedly ambiguous language in the claims and specifications themselves. Clearly, the specifications may not be used to expand the claims, but equally clear is the fact that the claims may be considered in conjunction with the specifications and drawings for purposes of better understanding the claims. Wyott

Mfg. Co. v. Doran Coffee Roasting Co., 160 F. Supp. 644 (D. C. Colo. 1958), modified, Doran Coffee Roasting Co. v. Wyott Mfg. Co., 267 F. 2d 200 (10th Cir. 1959); Morrill v. Automatic Industries, 93 F. Supp. 697 (D. C. W. D. Mo. 1950).

The second line of objection is specifically directed against the claim term "vertically adjustable frame pivotally mounted." Defendant contends that this claim language is totally free from ambiguity and requires a frame which is: 1. vertically adjustable and 2. pivotally mounted. The argument proceeds that as plaintiff's invention has no such literally described item, the claim is fatally defective because it does not claim the invention described.

Defendant cites Keystone Bridge Co. v. Phoenix Iron Co., 95 U. S. 274, 24 L. Ed. 344 (1877) for the proposition that when terms of a claim in a patent are clear and unambiguous, the patentee is bound by them and he can claim nothing beyond them. This Court does not quarrel with that statement of the law as applied to the undisputedly unambiguous terms involved in the cited case.

Clearly though the term "vertically adjustable frame pivotally mounted" is not totally free from ambiguity and subject to only one logical interpretation. The defendant has attempted to restrict the term to its literal meaning, contending that because the plaintiff's whole frame does not adjust vertically, it is not the item called for in the claim. Plaintiff's expert witness gives the term a second plausible meaning by explaining that it is "vertically adjustable" in that it adjusts about the pivot axis to effect vertical adjustment of all parts of the frame and boom except those on the axis. Plaintiff's equally logical interpretation shows ambiguity in the terminology, and gives the term significance in relation to plaintiff's machine, the accompanying specifications and pertinent drawings. Plaintiff's interpretation involves no expansion of claims, but merely clarification of them. A literal meaning

is not necessarily the only correct meaning. Therefore, the Court believes this claim term to be one over which reasonable men could easily differ, and the specifications and drawings should be permitted to aid in its proper interpretation.

Alternatively, this Court believes that if it were to hold *that defendant's literal interpretation of the term was the* only correct one, hence the term was unambiguous, the specifications and drawings should still be read with the claims for the purpose of better understanding the meaning of the claims in their entirety. Morrill v. Automatic Industries, 93 F. Supp. 697, 706 (D. C. W. D. Mo. 1950) states the better rule that claims may be read in connection with both specifications and drawings, whether the claims themselves are free from ambiguity or not.

Without question, more accurate language could have been used in the claims and specifications, but when they are read along with the supporting drawings, the ambiguities do not seem fatal. Read together, it would seem that one skilled in the art would have been able to construct the device described in the claims and specifications. The patent will not fail merely because more accurate language could probably have been used.

VALIDITY: CONCLUSIONS

In light of the preceding discussion, the Court reaches the following conclusions regarding the validity of the claims in suit:

The defendant has failed to overcome the presumption of the patent's validity. This presumption is clearly stated in the cases and in the statute. 35 U. S. C. § 282; Admiral Corp. v. Zenith Radio Corp., 296 F. 2d 708 (10th Cir. 1961); Bewal, Inc. v. Minnesota Mining and Mfg. Co., 292 F. 2d 159 (10th Cir. 1961).

Defendant has sought to overcome the presumption of validity by attempting to show: that the patent was in

"public use" for more than one year prior to the application; that the machine represented merely an aggregation of old elements disclosed in prior art; that the claims did not contain sufficient novelty and invention as to be patentable; and that the invention was not described with sufficient particularity as to enable one skilled in the art to construct the machine.

Essentially, the Court has found against the defendant on each of these primary contentions.

Although the invention saw some limited use for more than one year prior to the application, it was not in "public use" within the intended meaning of 35 U. S. C. § 102(b).

Upon careful analysis of all prior art cited by the defendant, the Court concludes that the mounting of a load bearing implement on a rotatable telescopic boom in plaintiff's device constitutes both novelty and invention. Connection of a load bearing implement to a piston rod has been the essential feature of most prior art cited by the defendant. For the reasons expressed in the above detailed analysis, a piston rod clearly does not accomplish the purposes of plaintiff's invention. The evidence also establishes a particular utility for plaintiff's machine with respect to certain earth-moving and bulk material handling operations.

Despite the existence of certain ambiguities, the claims, when aided by the specifications and diagrams, are sufficiently specific and definite as to enable a person skilled in the art to construct the machine as required by 35 U. S. C. § 112.

Plaintiff's patent claims 2, 6, 7, 8, 9 and 16 are valid.

II. Infringement

Having ascertained the validity of all claims presented, we now proceed to the ultimate question of infringement.

Prior to a claim by claim analysis, we turn our attention to defendant's infringement defense of estoppel, which defendant asserts in regard to four of the six claims in suit.

FILE WRAPPER ESTOPPEL

Defendant contends that claims 6, 7, 8, and 9 cannot be construed to include the Grademaster because of certain proceedings held in the Patent Office. A long history of correspondence between the Ferwerda attorneys and the Patent Office reveals that claims 6-9 were formerly presented as application claims 59-62. These claims, along with application claims 63-65, were stated by plaintiff's attorneys as being "revisions of claims formerly submitted of the nature of claims 35 and 40." Claims 35 and 40 had been previously rejected as "unpatentable over Stauft." Defendant refers to the file wrapper, which contains certain statements made by the Ferwerda attorneys. In correspondence accompanying the submission of claims 59-65 the attorneys stated that "the claims distinguish over this reference (Stauft) by reciting the telescoping boom sections, the boom construction of parallel beam members and the mounting of the boom in an annular bearing cradled on the rotatable platform of the vehicular base."

Defendant asserts that only because this statement was made by plaintiff's attorneys did the Patent Office allow claims 6-9. The argument proceeds that if only through the addition of these features can claims 6-9 be held as valid over Stauft, each one of these three features must either appear or be read into claims 6-9 by the Court. The focus of defendant's argument is on the term "parallel beam members." Of the three mentioned features, this is the only one that does not appear in claims 6-9. Defendant concludes that it must be read into these claims, and

that once it is there can be no infringement of claims 6-9 by defendant's Grademaster because there is no evidence that the Grademaster has such a structure.

Defendant has not chosen to present this line of argument in light of the conventional concept of file wrapper estoppel. Plaintiff, however, has chosen to characterize the contention as "file wrapper estoppel," and has proceeded to refute defendant's argument on that basis.

The doctrine of "file wrapper estoppel" applies when an applicant, as a result of a rejection of his application, inserts certain limitations and restrictions for the purpose of inducing the Patent Office to grant his patent. After subsequent issuance of the patent, the patentee cannot thereafter claim that his patent shall be construed as it would have been if such limitations and restrictions were not contained in it. 2 Walker on Patents 1215 (Deller ed. 1937); Smith v. Magic City Kennel Club, Inc., 282 U. S. 784, 51 S. Ct. 291, 75 L. Ed. 707 (1931).

For at least two reasons, the doctrine of "file wrapper estoppel" does not apply in this case. First, there was no rejection of plaintiff's applications for claims 6-9. Secondly, the defense of "file wrapper estoppel" here would be based on the patentees having added the limitation of "parallel beam members" to the claims in suit to secure their allowance. However, the claims in suit make no mention of parallel beam members.

Because defendant's argument does not fall squarely within the doctrine, further explanation must be given to satisfactorily dispose of defendant's contentions. Defendant wishes to read the words "parallel beam members," mentioned by plaintiff's attorney and appearing in the "Remarks" section of the file wrapper, into plaintiff's claims 6-9. In support of this proposition that claims 6-9 are to be read including "parallel beam members," defendant cites Haynes Stellite Co. v. Osage Metal Co., 110 F. 2d

11 (10th Cir. 1939). In that case an element necessary to the proper functioning of the apparatus was read into the claims by the Court. Such situation seems properly distinguishable from the case at hand, in that the element read into the claim was absolutely necessary for operation of the apparatus.

Defendant's whole estoppel argument is based on the statement made by plaintiff's attorney accompanying the submission of application claims 59-65. To properly assess the merit of defendant's argument, the Court has carefully scrutinized this statement and the accompanying correspondence. The attorney stated that the "* * * claims distinguish * * * by reciting * * * parallel beam members. * * *" But clearly claims 6-9 make absolutely no mention of "parallel beam members." Therefore, logic alone demands the conclusion that the attorney was either referring to other claims than those in question or that he made a clearly erroneous statement.

The correspondence in question refers not only to application claims 59-65 but also to application claims 66-71. The wording of application claims 69 and 70 includes "parallel beam members," therefore when the attorney stated the three distinguishing features of these claims over the Stauft patent, he probably was referring to the aggregate of application claims 59-71.

Too, the statement by plaintiff's attorney might have been clearly erroneous. Eversharp, Inc. v. Fisher Pen Co., 204 F. Supp. 649, 674 (N. D. Ill. 1961) succinctly states the proper law if such is the case.

> "Clearly erroneous statements of counsel, that certain limitations are contained in each of several claims, inadvertently made in remarks accompanying an amendment to a patent application, cannot destroy the clear and express differences recited in such claims." (p. 674).

Claims 6-9 make no mention of "parallel beam members." The claims stand on their own two feet without any mention of these words; there is no reason why the Court should read these words into the claims. Accordingly, claims 6-9 have not been immunized from possible infringement by defendant's estoppel contention.

The parties have limited the infringement issue to certain, specific claim elements. As each of the six claims contains one or more of these elements, there is an infringement question presented by each of the claims. In order to find infringement of a particular claim "every element of the claim, or its functional equivalent, must * * * be found in the accused article." Lockwood v. Langendorf United Bakeries, Inc., 324 F. 2d 82 (9th Cir. 1963).

CLAIM 2

Defendant contends that his machine has neither the "vertically adjustable frame" nor the "associated means" for changing the angle of the implement as defined in claim 2.

a. "Vertically adjustable frame"—In passing on the patent's validity, this Court has already held that plaintiff's invention contains an element which may be construed as a "vertically adjustable frame" as specified in plaintiff's claim 2. The question now before the Court is whether or not the Grademaster contains the same or an equivalent element.

Plaintiff's exhibit 1 (Patent) shows the "vertically adjustable frame" to be comprised of ring 27 (Figure 3) carrying rollers through which the main boom section 51 (Figure 2) rotates. Side rails 37 (Figure 1) and a rear cross-member, which carries the bearing marked 39 (Figure 1), comprise the remainder of the section. This frame

pivots about an horizontal axis to vertically adjust the position of the boom.

Plaintiff's exhibit 5G (Appendix 1) shows a cradle "C" as part of the Grademaster. Plaintiff's expert, Lay testified that this cradle constituted a "vertically adjustable frame" as specified in claim 2. He identified this cradle as corresponding in function to the "vertically adjustable frame" in the Ferwerda machine.

Comparison of plaintiff's "vertically adjustable frame" with cradle "C" of defendant's Grademaster reveals a striking similarity of purpose. Both parts pivot up and down on an horizontal axis. Both parts allow a boom to pass through, which elevates and depresses as the "frame" or "cradle" is moved up and down about its axis. Both parts also permit the boom to be rotated within the "frame" or "cradle." The plaintiff's "vertically adjustable frame" and cradle "C" of the Grademaster are equivalent elements.

b. "Associated means"—Defendant's position here is that the Grademaster does not have the associated means for changing the angle of the tool at the outer end of the boom, as is called for in the Ferwerda patent. Defendant's Grademaster has an hydraulic cylinder mounted on the extensible boom section and connected to the tool head for its operation. This hydraulic cylinder is in no way hydraulically associated with the cylinder which is responsible for the movement of the extensible boom. Therefore, defendant argues that the Grademaster does not have an "associated means" for manipulating the tool head, but an entirely independent means.

Plaintiff maintains that the claim term "associated means" has nothing to do with hydraulic association. His claim interpretation requires only that the means for adjusting the tool be associated with the means for extending the boom. This physical association, as it seems

to be construed, is present because the tool cylinder is mounted on the extensible boom, and when the boom cylinder moves the boom, the tool cylinder on the boom moves also to prevent the tool angle from changing.

Plaintiff's exhibit 1 (Figure 1) shows Gradall boom cylinder 106 and tool cylinder 107. Tool cylinder 107 is mounted on the rear main boom section as contrasted to tool cylinder 107 of the Grademaster, which is mounted on the extensible boom section, shown in plaintiff's exhibit 5-H (Appendix 2). Testimony of plaintiff's witness, Lay, and the patent figures themselves, reveal that these two cylinders in the Gradall are both part of the same hydraulic system. In order to maintain a given tool position, the piston in 107 must move at the same speed with reference to cylinder 107 as the piston in 106 must move with reference to cylinder 106.

A basic determination of what the term "associated means" contemplates must first be made. Essentially, defendant maintains that it means hydraulic association, and plaintiff focuses on physical association. Looking at the patent itself, specifically column 6 of plaintiff's exhibit 1, there appears an explanation as to how the pistons must move in "unison" to maintain a given tool position. There further appears the intricate process whereby the hydraulic fluid re-positions itself in the associated hydraulic systems to effect a different angle of the tool head. Additional patent wordings seem to indicate that the patent itself contemplates hydraulic association, rather than physical association. Also, it seems difficult to read "associated means" as merely physically associated, for then all elements in the patent could be so described, and the terminology would be of little assistance in understanding the patent.

We conclude that "associated means" refers to hydraulically associated. In the Grademaster, the two pis-

tons are completely hydraulically independent. There is no need for elaborate coordination between the pistons in order to move the tool angle. There is no conceivable fear of cavitation problems on boom extension, as testified to by defendant's expert witness. The implementation of two separate hydraulic systems is clearly an advance in the art. The Grademaster does not have "associated means" as understood by this Court, therefore claim 2 is not infringed.

Claims 6 and 7

Claims 6 and 7 may be treated together, because each claim contains the same two contested elements. The parties have agreed in the pre-trial Order that infringement of one of these claims necessarily would infringe the other claim.

a. "A fixed orientation"—This language appears in claims 6, 7 and 9. Claim 7 calls for "an implement • • • said implement having a fixed orientation relative to the longitudinal axis of said extension section." Plaintiff contends that "fixed orientation" means that the implement is fixed so as to rotate with the extensible boom. The fact that the implement is movable relative to the boom about a pivot axis which lies perpendicular to, and extends across the longitudinal axis of the boom, does not preclude the implement from lying in "fixed orientation" relative to the longitudinal axis of the boom. Defendant's own expert lends some credence to plaintiff's interpretation when he testified that the term "fixed orientation" seems to be a way of showing that the implement has to rotate with the extensible section.

Defendant, however, asserts that the implement at the end of the boom is not in "fixed orientation" to the boom, but rather is pivotally mounted for movement with respect to the boom. It maintains that the Grademaster implement,

along with the implements shown in figures 1, 2, 6 and 8 of plaintiff's exhibit 1 (the Ferwerda patent), do not meet the "fixed orientation" specification because they can be swung about an axis extending crosswise of the longitudinal axis of the boom. By "fixed orientation," the patent commands that the implement can in no way move as a unit. Because the Grademaster implement does move pivotally as a unit, defendant contends that there can be no infringement.

Figure 7 of plaintiff's exhibit 1 provides an example of "fixed orientation," says defendant. Defendant's expert testified with respect to figure 7 that "the two parts of the clam shell do move apart and together, but the implement as a whole is fixed." Plaintiffs note in their brief that the Grademaster tool head movement is the same as the clam shell bucket movement in figure 7. The Court is unable to agree with this conclusion. It is true that both halves of the clam shell move in relation to the boom, but it appears that the mouth of the clam shell will always be at a similar angle, i. e., a clearly "fixed orientation," in relation to the boom section. This is not true for the Grademaster tool head or for those appearing in figures 1, 2, 6 and 8 of exhibit 1. Those tool heads pivot freely about an axis extending crosswise of the longitudinal axis of the boom.

To say that the tool heads in figures 1, 2, 6 and 8 and the one mounted on the Grademaster have similar movements, is not to answer the question of whether they have "fixed orientation," however. The answer to that question must lie in the phraseology of the claims and specifications of the patent. See Texas Co. v. Globe Oil and Refining Co., 112 F. Supp. 455 (N. D. Ill. 1953), affirmed, 225 F. 2d 725 (7th Cir. 1955).

Defendant maintains that claims 2, 8 and 16 call for an implement movably mounted on a boom. This is obvious, for each of these claims also provides a means for moving the implement relative to the boom. Claims 6, 7 and 9, which call for an implement having a "fixed orientation,"

do not define the implement as movably mounted and make no mention of a means for moving the implement with respect to the boom. Therefore, defendant concludes that "fixed orientation" means an immovable implement or at least a fixed digging angle as is characteristic of the clam shell bucket.

Turning now to plaintiff's exhibit 1, column 2, line 27 of the specification reads "* * * a specialized implement is provided * * * subject to harmonious control with the movement of the apparatus." Column 5, line 49 specifies that "the hoe-type bucket may thus be turned to any desired angle * * *." Column 8, line 43 speaks of "* * * controlling the operation angle * * * of the implement mounted on the free end of the boom." These specification excerpts are clearly describing implements other than the clam shell of figure 7. Nowhere do the specifications mention an implement which is rigidly fixed to the boom. And only brief mention is made at the bottom of column 8 of the clam shell bucket. Therefore, the "fixed orientation" descriptions in claims 6, 7 and 9 if given defendant's interpretation, must either all refer to the figure 7 clam shell briefly mentioned in the specifications, or to a rigidly affixed implement nowhere described in the specifications. Neither of these alternatives seems likely to have been the intent of the patentee.

It remains only to consider the defendant's claim differentiation argument. Under this doctrine, express limitation in one claim negatives any intent to similarly limit by implication any claim in which such limitation is not expressed. Texas Co. v. Globe Oil and Refining Co., supra. Therefore, defendant contends that if claims 6, 7 and 9 define a tool in "fixed orientation" as one that will rotate with the boom about its longitudinal axis, then claims 2, 8 and 16, which make no mention of "fixed orientation", must of necessity define a tool which does not necessarily rotate with the boom. But to do this, is to go beyond the

specifications and the invention claimed. Therefore, claims 2, 8 and 16 must conform to the invention and refer to a tool which rotates with the boom about its longitudinal axis, and claims 6, 7 and 9, which speak of "fixed orientation," must refer to a tool which does something less, i.e., is rigidly fixed to the boom.

Plaintiff points to Texas Co. v. Globe Oil and Refining Co., supra, to refute defendant's argument based on the same case. Therein the Appellate Court expressly pointed out that the rule of claim differentiation is inapplicable under circumstances where the limitation in the narrower claim must be read into the broader claim in order to render the claims consistent with the invention. Such is the case at hand, which means that "fixed orientation," meaning an implement which is fixed so as to rotate with the extensible boom, can be implied in claims 2, 8 and 16, and mean in those claims the same thing that it means in claims 6, 7 and 9. The rule of claim differentiation must give way to the controlling rule that a patentee's broadest claim can be no broader than his actual invention. Kemart Corp. v. Printing Arts Research Laboratories, 201 F. 2d 624 (9th Cir. 1953).

"Fixed orientation" means a tool that rotates with the boom. That is the kind of tool appearing on the Grademaster, therefore claims 6, 7 and 9 do not avoid infringement on the basis of this element.

b. "Oscillation"—Defendant contends that the Grademaster does not have a means mounting the boom for "oscillation," or any mechanism for "oscillating" the boom. This contention is based on the fact that the Grademaster boom is rotated by a reversible hydraulic motor, which is capable of continuous rotation in any one direction. Pointing to plaintiff's own witness who defined oscillation as a more restricted movement than rotation, i.e., a "back and forth" movement, defendant maintains

that the Grademaster's rotating boom cannot infringe claims 6, 7, 8, 9 and 16, all of which contain the terms "oscillation" or "oscillating."

On the other hand, it is plaintiff's position that just because the Grademaster boom is capable of continuous rotation, this does not mean that there is not infringement of the lesser included function of oscillation. Plaintiff points to the testimony of defendant's own expert, who stated substantially that the advantages of full rotation are rather small. Plaintiff cites numerous authorities for the proposition that addition of a function does not necessarily avoid infringement. See, Kelley-Koett Mfg. Co. v. McEuen, 130 F. 2d 488 (6th Cir. 1942), cert. den., 318 U. S. 762, 63 S. Ct. 662, 87 L. Ed. 1134 (1942). Therefore, defendant's adding the function of continuous rotation, while maintaining the function of oscillation, does not avoid infringement.

Essentially, we agree with plaintiff's position. The crux of infringement is whether "* * * the inventive idea of the original patentee has been appropriated, and whether the defendant's device contains the material features of the patent in suit * * *." Crown Cork & Seal Co. of Baltimore City v. Aluminum Stopper Co., 108 F. 845, 866 (4th Cir. 1901). The question then is not whether "oscillation" is equal to "rotation." That determination involves little more than a question of semantics. The crucial point is whether defendant has appropriated plaintiff's "inventive idea" or not. It follows that if rotation were significantly more advantageous than oscillation, and added many new and important functions, there probably would not be any infringement.

However, it seems that the advantages added by rotation capabilities are quite small. Defendant's expert said that in scraping the roof of a tunnel, complete rotation might be of "slight advantage." He also testified to an advantage in being able to turn the tool head completely upside down when the boom is cradled on the carrier and in the

road travel position. Thirdly, if a rock were stuck in the bucket, it would be advantageous to be able to turn the bucket upside down to shake the rock out. All of these "advantages" seem minor. The primary utility of both plaintiff's machine and defendant's Grademaster is on the open road in excavating and bulk material moving operations. It seems that it is in this capacity that functions must be compared. For infringement, there must exist "substantial identity of function, means and result." Martin v. Ford Alexander Corp., 160 F. Supp. 670, 676 (D. C. S. D. Calif. 1958). From the evidence presented, it would seem that there exists "substantial identity" of boom moving functions in earth moving and bulk material moving operations.

It remains only to consider the two additional arguments put to the Court by defendant. It cites Mattel, Inc. v. Louis Marx and Co., 200 F. Supp. 593 (D. C. Calif. 1961) as distinguishing between "oscillation" and "rotation." The case is clearly distinguishable on its facts. In Mattel, the original claims made were broad enough to cover both oscillation and rotation, but they were specifically rejected for narrower claims containing only oscillating means. Such a situation created the classic file wrapper estoppel case, and the Court was prevented from equating "oscillating" in the accepted claims with "rotating" in the rejected claims.

Furthermore, in the Mattel toy gun case, "rotation" was presumably a one way rotation. Therefore, the back and forth movement of "oscillation" did not come within the movement of one way rotation. This is not the same problem as presented by the free rotation movement in the present case.

Defendant does advance another form of the "file wrapper estoppel" doctrine at this point. He traces the history of numerous rejections of plaintiff's claims. The boom turning function had been described as "rotation" in these

earlier rejected claims. When claims 6-9 were finally accepted, the function described in them was "oscillation." Defendant evidently infers that because claims containing the term "rotation" were rejected, and those containing the term "oscillation" were accepted, this means that plaintiff is restricted to the claim term "oscillation," which is not the equivalent to "rotation."

This seems little more than conjecture, for neither the file wrapper nor the evidence discloses that the reason new application claims 59-62 (6-9 in suit), combining elements of former application claims 35-40, were earlier rejected and later accepted was because the word "oscillation" was substituted for the term "rotation." Actually, the file wrapper discloses exactly the contrary. In defendant's exhibit A, on page 97 of the file wrapper, it is clearly shown that claims 35-40 had been worded completely different and had been rejected for other reasons enumerated therein.

The Grademaster boom, being capable of free rotation, has substantial identity of function with plaintiff's boom described as one capable of "oscillation." Therefore, infringement of claims 6, 7, 8, 9 and 16 is not avoided by these contentions.

CLAIM 8

The only dispute here was over the claim term "oscillation." For those reasons immediately above set forth, infringement of Claim 8 by the Grademaster is not avoided for want of this element.

CLAIM 9

Defendant asserts that this claim is not infringed because the Grademaster does not have a "fixed orientation" between the implement and the boom; it does not have a means for "oscillating" the boom about its axis; and it does not have an "annular track" and an "annular

bearing" in said track so arranged that the boom is "held against longitudinal movement relative to said annular track." The first two of these contentions have already been dealt with above. The "annular track" and "annular bearing" question will be dealt with at this time.

Plaintiff's expert testified that cradle "C" of the Grademaster (exhibits 5G and 5H) was an "annular track," and that the roller bearing in the track was an "annular bearing" which held the boom against longitudinal movement. Defendant's own expert testified that the Grademaster had two annular bearings and tracks. Furthermore, defendant admitted in response to plaintiff's requests for admissions that the Grademaster had an "annular bearing means which encircle the boom section and which hold the boom section against movement longitudinally of the axis of the boom." This is exactly what is described in claim 9.

But defendant's primary objection here is directed at the claim 9 phraseology "said base section having an annular bearing in said track so arranged that said boom is held against longitudinal movement relative to said annular track." Several objections of non-specificity of claims are aimed at this language. Plaintiff's expert testified that bearing 39, shown in plaintiff's exhibit 1 (Figure 1) of the first machine made by plaintiff, was what he thought prevented longitudinal movement of the boom. Admittedly, this does at first glance seem to be contrary to the claim 9 language. If a claim is susceptible to more than one interpretation, that interpretation which will define the actual invention should be adopted. *McClain* v. Ortmayer, 141 U. S. 419, 428, 12 S. Ct. 76, 35 L. Ed. 800 (1891). Following this principle, defendant maintains that to preserve claim 9 from the defect of uncertainty, the claim must be limited to an annular track assembly having a bearing on the end of the boom, as bearing 39 shown in the patent, to prevent longitudinal movement of the outer boom section. As the Grademaster clearly has no

such bearing at the rear of the boom, there can be no infringement.

Therefore, defendant's argument of non-specificity regarding the "annular bearing" terminology and functions, seeks to read into claim 9, "having a bearing on the rear of the boom," which the Grademaster obviously does not have. As we have previously noted in our discussion concerning the specificity of claims, some of the claims here are not as clear as they otherwise might be, but one skilled in the art can properly translate them. They must be read in conjunction with the specifications and drawings when any ambiguity arises.

When claim 9 is read in its entirety, and with the attendant specifications and drawings, it seems clear that the patentee's intent was not to specify that the annular bearing itself had to hold against the longitudinal movement of the boom. It seems rather that plaintiff's intention was to claim a "cradle" or "frame", which included an annular bearing for boom rotation, and which also provided a means for holding against longitudinal movement. Witnesses for both sides seemed to understand throughout the trial that the cradle held against longitudinal movement by the boom. It is only with regard to claim 9 that defendant contends that the holding bearing must be mounted on the end of the boom to meet the claim.

Claim 9 does not avoid infringement on any of the grounds asserted by defendant.

Claim 16

Defendant's contention here was that the Grademaster boom did not have a means for "oscillating" it about its axis as was defined in the claim. In accordance with our findings under claims 6 and 7, infringement of claim 16 is not avoided for want of a means for "oscillation" in the Grademaster.

It is well established that the test of infringement is whether the accused device does the same work in substantially the same way and accomplishes the same result. Sanitary Refrigerator v. Winters et al., 280 U. S. 30, 42, 50 S. Ct. 9, 79 L. Ed. 147 (1929); Sears Roebuck v. Jones, 308 F. 2d 705, 708 (10th Cir. 1962). The evidence establishes well that the Grademaster does exactly this. The claimed differences in certain elements arise from certain non-fatal differences in descriptive terminologies, many of which are essentially no more than semantic difficulties. The inventive idea has been appropriated, and this is clearly the most significant and determinative factor in this case.

Therefore, this Court specifically holds that:

1. Claims 2, 6, 7, 8, 9 and 16 of the Ferwerda patent are valid.

2. Claim 2 is not infringed.

3. Claims 6, 7, 8, 9 and 16 of the Ferwerda patent are infringed by the defendant's Grademaster.

4. Plaintiff is entitled to judgment to enjoin the continued infringement of these claims.

At an appropriate time, evidence will be taken on the question of damages suffered by plaintiff. Judgment will be entered accordingly.

The foregoing shall constitute my Findings of Fact and Conclusions of Law in conformance with Rule 52 of the Federal Rules of Civil Procedure.

Counsel for plaintiff will prepare a Judgment and Decree in accordance with this Opinion.

ALFRED A. ARRAJ,
Chief Judge.

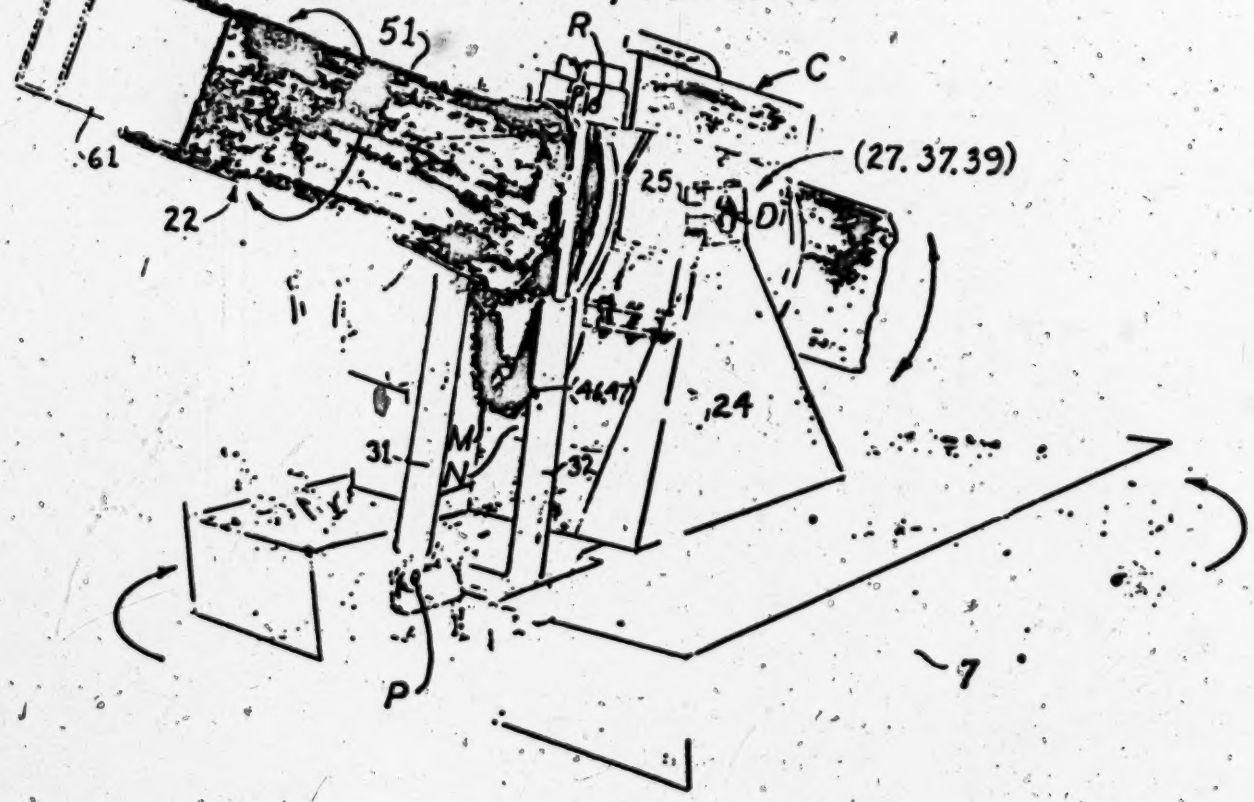
Dated: September 18, 1964.

APPENDIX 1

Annexed to the Court Opinion

(See opposite page)

DRAWING ILLUSTRATING PLATFORM AND BOOM MOUNTING IN DEFENDANT'S GRADEMASTER, MODEL 40



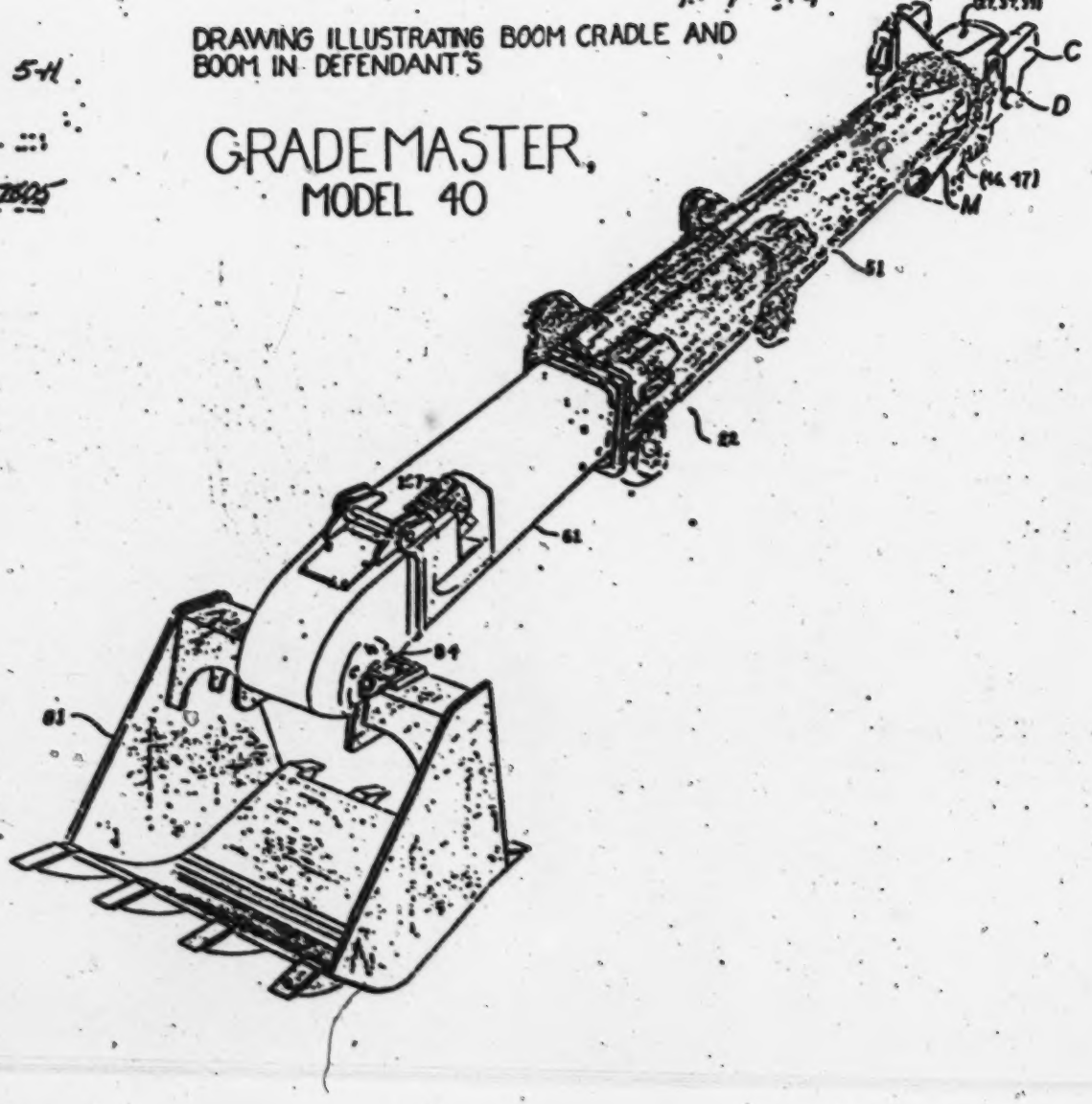
APPENDIX 2

Annexed to the Court Opinion

(See opposite page)

DRAWING ILLUSTRATING BOOM CRADLE AND BOOM IN DEFENDANT'S

GRADEMASTER,
MODEL 40



APPENDIX 2

APPENDIX E

Testimony of Ray Ferwerda, on Direct Examination, Regarding Use of Machine at Ravenna (R. 159-160)

"Q. Mr. Ferwerda, you have in your hands the three latest photographs which I handed to you. Do all of those have a triangular boom on them? A. Yes.

Q. Were they all tried out on a job? A. Yes.

Q. Do you know where they were tried out? A. The triangle boom was first used on the Ravenna arsenal job.

Q. Were all three of those machines used on the Ravenna arsenal job? A. I believe so.

Q. About when was this use? A. When?

Q. When were they used? A. In the spring of 1943.

Q. Under whose control were they? A. My brother and myself.

Q. Can you state about how long they were on that job? A. Approximate six weeks.

Q. Were they operative all of that time; did they give you any trouble? A. Some.

Q. Could you give any estimate as to what time they were down? A. Percentagewise?

Q. Yes. A. Approximately 25 per cent.

Q. Did those three machines, or any of them, operate satisfactorily? A. Partially.

Q. Were you satisfied with them, you and your brother, for final adoption? A. No.

Q. What did you do next with your program on the Gradall? A. After we found this machine not satisfactory, or marketable, we started to think, and we re-engineered a different machine, which we thought was better.

Q. About how long did it take you to re-engineer the machine you are talking about? A. About six months on paper.

Q. Did you have production drawings made? A. Yes, sir.

Q. Did you have production drawings of any of the previous machines you have testified to this afternoon? A. No, sir.

Q. Did you make any further use of the triangular boom machine after the Ravenna arsenal use? A. Yes, I believe we had it in Pennsylvania for a couple of weeks on some other contracts.

Q. About when would that have been? A. About the fall of 1943.

Q. After that did you make further use of the machine? A. No, sir.

Q. State whether or not you used any of the parts of any of these early machines of which you have testified this afternoon in building the machine you completely redesigned? A. No, sir.

Q. State whether or not there is any relationship between this completely redesigned machine and the machine shown in the patent in suit? A. Similarity?

Q. Yes. A. I wouldn't think so, no.

Q. In other words, when you finished with that machine that you hold the photographs of, and you completely redesigned it, what machine did you come up with? A. With the machine that we applied for—patents for.

Q. The patent here in suit? A. Yes."

APPENDIX F

Plaintiff's Exhibit 1—Fig. 1 of Ferwerda U. S. Patent in Suit, No. 2,541,045

(See opposite page)

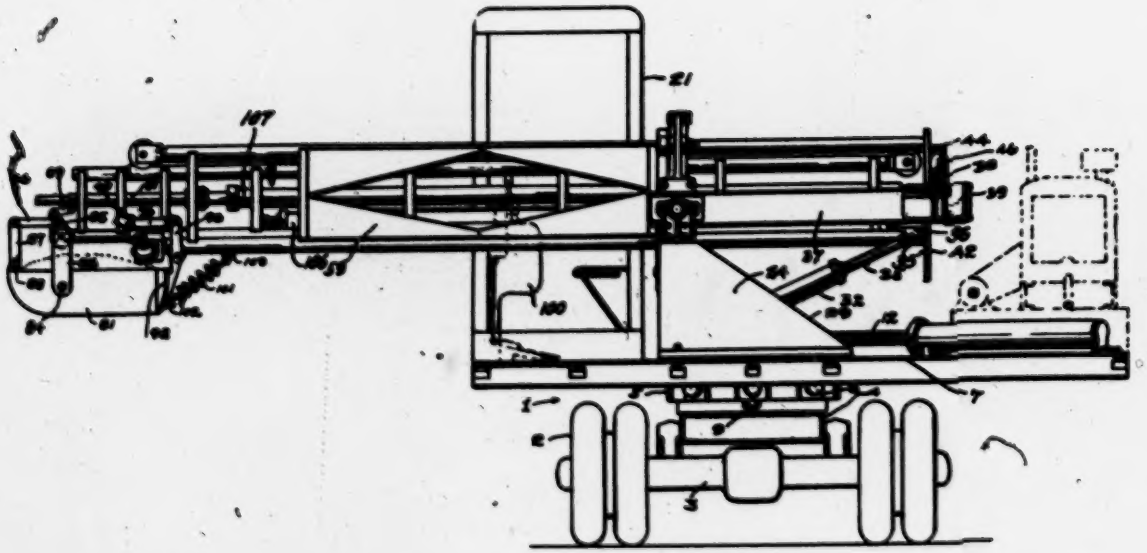


FIG. 1

APPENDIX G

Defendant's Exhibit R—Claim 6 of the Patent in Suit in Sub-paragraph Form

CLAIM 6

Apparatus comprising a base,
a boom mounted on said base for sluing,
mechanism for sluing said boom,
said boom having a base section
and an extensible section telescopically
mounted on said base section,
mechanism to extend and retract said extensible section,
an implement attached to the free end of said extensible
section and having a working edge,
said base section having a transverse pivotal mounting,
mechanism for tilting said base section
about said pivotal mounting,
one of said boom sections having a fixed orientation
relative to said implement working edge,
said one boom section being mounted for oscillation about
an axis extending longitudinally of said boom,
and mechanism for oscillating said one boom section.

APPENDIX H

Defendant's Exhibit W, Sub-Exhibit B Thereof—Photograph of Machine Used at Ravenna

(See opposite page)

APPENDIX I

Defendant's Exhibit W, Sub-Exhibit E Thereof—Mimeographed Statement Distributed by the Ferwerda Brothers Regarding Machine Used at Ravenna

In December of 1942, we started grading operations at the Portage Ordnance Depot, Ravenna, Ohio. The work consisted of extension of railroads, new roads and loading platforms. Frost, snow and rain made it impossible for us to do any trimming on slopes, ditches and berms. The best we could do was to rough them through with clam-buckets and most of the time that was impossible on account of heavy frost. The rough grading operations continued because we dug with power shovels from the bottom of our grade upward, underneath the frost.

With several scraper units, capacity as high as 15 cubic yards, we used a very heavy six ton ripper to break the frost. That did the work successfully but it could not be used to break frost in ditch line because it would tear chunks out of the sides which had to be held to line and grade. The result was that our ditching, sloping and berming lagged behind.

In the middle of March the frost came out of the ground and left us in a very muddy condition which continued on into June on account of having considerable rain.

The Gradall was in action as soon as the frost disappeared and regardless of mud and rain, started operations on the shaping of slopes, ditches and berms. The slopes measured from one to twenty feet high. The ditches were from one to five feet deep with considerable water running in them. The berms were from two to eight feet wide and they were in many instances so muddy that men would sink in them

Statement by Ferwerda Brothers Regarding Machine Used at Ravenna.

to their knees. Approximately two miles of this work was completed during the wet season. Other contractors who visited the project, complimented us on our machine and the quality of work performed.

The project engineers and inspectors spoke very highly of our work with this machine. The above mentioned operation would have taken from thirty to forty men with picks and shovels and they would have been unable to do the work as performed by the Gradall on account of mud clinging to their tools. At that time it was impossible to hire that many men on account of the labor shortage and if our Gradall had not been there, it would have been impossible to complete that project during that period.

FERWERDA BROTHERS

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In the Supreme Court of the United States

OCTOBER TERM, 1965.

No. 1092.

UNIVERSAL MARION CORPORATION,

Petitioner,

vs.

THE WARNER & SWASEY COMPANY, *et al.,*

Respondents.

BRIEF OF RESPONDENTS, THE WARNER & SWASEY COMPANY, ET AL., In Opposition to Petition for Writ of Certiorari.

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OPINIONS BELOW.

The opinion of the Court of Appeals for the Tenth Circuit is reported at 354 F. 2d 541, and appears on pages 2a to 9a of the Appendix to the Petition. The decision constituting the findings of fact and conclusions of law of the United States District Court for the District of Colorado are reported at 23 F. Supp. 719, and appear on pages 11a through 63a of the Appendix.

JURISDICTION.

The jurisdictional requisites are adequately set forth in the Petition.

QUESTIONS PRESENTED.

I. Question I as presented by Petitioner presents no question other than: Is the decision of this Court in *Elizabeth v. Pavement Co.*, 97 U. S. 126 (1877), applicable today to determine whether or not a use of an invention in public was an experimental use or a "public use" in contravention to the statute? This question assumes, without support in the record, that Petitioner established a use in public, before May 15, 1943, of a completed invention. Moreover, the record does not support Petitioner's characterization of the use which occurred as an "admittedly * * * commercial exploitation."

II. Question II as presented by Petitioner is hypothetical in that it presupposes, without any support in the record, that the District Court found that a completed invention was used in public and, after so finding, found that the use was experimental by applying a presumption in favor of Respondents. The discussion of this issue by the District Court clearly shows that no presumption was applied. Moreover, there is nothing in the record to suggest that the Court of Appeals applied a presumption in favor of Respondents.

In support of the lower court's judgment, Respondents will argue, if certiorari is granted, that Petitioner had not carried its burden of showing that the invention was completed and thereafter in public use prior to May 15, 1943.

CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED.

These provisions are adequately set forth in the Petition.

STATEMENT OF THE CASE.

Background.

This action was brought by The Warner & Swasey Company, exclusive licensee of Patent No. 2,541,045, along with the owners of the patent, against Universal Marion Corporation, for their manufacture and sale of a "Grademaster" excavating and grading machine. In the District Court, Petitioner contended that the patent was not infringed and was invalid as (1) failing to define a patentable invention over the prior art and (2) by reason of a prior public use of the invention at Ravenna more than one year prior to the filing of the patent application contrary to the provisions of 35 U. S. C. 102(b). The District Court found that the patent was infringed, was patentable over the prior art and that there was no prior public use as to invalidate the patent. Petitioner appealed the decision on validity and the Court of Appeals for the Tenth Circuit affirmed the District Court. Petitioner then filed its petition for a writ of certiorari and directed the questions to the defense of public use.

The public use defense raised by Petitioner is based on the trying of a prototype machine at Ravenna, Ohio between mid-March 1943 and May 15, 1943, the application having been filed on May 15, 1944. In the spring of 1943, the inventors, Ray and Koop Ferwerda, were working on a government arsenal project at Ravenna which had been underway for some time. While the record is not clear as to the extent of the use before May 15, 1943, the

record supports and the District Court held that the machine was used about six weeks during a three month period which extended from about mid-March to mid-June 1943 (Appendix 16a). Any use before May 1943 would have been more than one year before the filing of the application. The District Court held any such use to be experimental only, stating:

> "Although the invention saw some limited use for more than one year prior to the application, it was not in 'public use' within the intended meaning of 35 U. S. C. § 102(b)." (Appendix 44a.)

The burden of proving public use was Petitioner's. 35 U. S. C. § 282.

Invention.

The invention of the patent in suit taught the use of a rotatable telescoping boom in an excavating and grading machine for supporting and operating an implement, such as a bucket. The rotation of the boom allows the implement to be rotated about the boom axis so as to tilt the implement for working at various angles. In addition, the implement in the patented machine is mounted on the end of the boom for movement in a "wrist action" about an axis extending cross-wise of the boom. This coupled with boom rotation and mechanism for telescoping the boom, raising and lowering the boom and swinging the boom horizontally provides five distinct movements which enable the machine to accomplish the various purposes for which it was intended.

Machine at Ravenna Did Not Have Patented Features.

The patent claims in suit not only include the concept of the novel rotatable telescopic boom but certain claims also include the features of the wrist action at the end of the boom (claims 8 and 16, Annex A, pp. 26, 27) and an annular track or cradle which supports the telescopic boom for rotation (claim 9, Annex A, pp. 26-27). The record is clear that the machine which was tried out at Ravenna for a limited time immediately preceding the critical date did not have these features (Annexes C, D, E, F; pp. 30-34).

Development of Invention and Test at Ravenna.

As found by the District Court (Appendix 15a, 16a), the Ferwerdas built their first machine in the fall of 1942 and tried it out very briefly on a road project on Route 306 in Ohio. While this machine had the concept of a rotatable telescopic boom, it did not have the annular cradle or track or the wrist action of the patented machine. The boom of the first machine included several telescoping channel-like sections and an overhead boom for supporting the telescoping sections (Annex B, p. 29). Following an hour-long experimental application in the fall of 1942, the first machine was returned to the shop for modification, after which it was again used for about an hour or an hour and a half and was still found to be unsatisfactory.

During the winter of 1942-43 additional changes were made in the machine. The inventors removed the channel-type telescoping boom and replaced it with a completely different boom, a "three point suspension" boom, of the type shown in the patent. This boom structure did not include an overhead boom (Annex B, p. 29). The modified machine was then taken to a construction project at

the Ravenna Arsenal which, at that time, had been underway for over four and one-half months (Appendix 70a) and tried out (Appendix 64a). The machine was only one of many pieces of equipment on the construction project where, as found by the District Court, there were about ten bulldozers, six scrapers and tractors, shovels and cranes, and about twenty-five or thirty other pieces of equipment on the job (Appendix 18a). The machine was used for about six weeks during a three-month period extending from about mid-March to mid-June to grade two miles of berms and ditches and was down about 25% of the time during which time changes were made as found by the District Court (Appendix 16a).

While changes were made in the machine at Ravenna, more importantly, immediately after Ravenna, the machine was completely redesigned and the features of the annular track and wrist action were *for the first time* incorporated into the design. The annular track, the element which supports the novel rotatable telescopic boom, is specifically set out in patent claim 9 (Annex A, pp. 26-27). The wrist action, which greatly improves the efficiency and utility of the machine, is specifically recited in patent claims 8 and 16 (Annex A, pp. 26, 27). The patent application was filed at the most no later than six months from the time that the final design was completed and included these important features and changes.

Machine at Ravenna Under Control of Inventors.

During the time that the machine was used at Ravenna, the machine was under the control of the inventors (Appendix 64a). At no time prior to May 15, 1943 did anyone sell or license or attempt to market any machine. No production drawings were made. No direct financial return was received for the use of any machine; the en-

tire payment was for construction work on which the machine was used at contractors' option along with much of their equipment.

Documentary Evidence.

The record includes documentary evidence which substantiates the testimony of co-inventor Ray Ferwerda with regard to the development of the patented machine. Photographic evidence (Annex B, p. 29) establishes the structure of the first machine and documents the fact that it did not have the wrist action or the annular cradle feature of the invention. Photographs (Annexes C, D, and E, pp. 30, 31, and 32) also show the structure of the machine which was used at Ravenna and a comparison of these photographs and the photograph of the earlier machine establishes the described change in structure.

Not only was the structure of the machine documented by the photographs but the very paper so heavily relied upon by Petitioner in arguing public use is documentary evidence which clearly establishes that the use was not before mid-March 1943 (Appendix 70a).

The patent drawings document the changes which were made as a result of the use at Ravenna. Moreover, the inventors made an oath when the patent application was filed in 1944 that no public use had occurred.

Testimony as to Experimental Nature and Need for Testing.

Not only did the District Court have the opportunity to consider the testimony of one of the inventors, Ray Ferwerda, who testified, Appendix 64a, that the machine at Ravenna was being "tried out," that the inventors did not find the machine "satisfactory," or "marketable" and that it was "re-engineered," but it also had the benefit of evi-

dence and testimony from witnesses of both Petitioner and Respondents concerning the necessity for testing a machine of the type involved in the Ferwerda patent.

Mr. Nichols, Respondents' expert, testified (R. 171):

> "Q. Mr. Nichols, would a period of six months of testing of a new machine, where the basic design involves innovations over machines previously introduced of some substantial nature be an excessive period to field test a machine in the excavating industry? A. It would be very short.
>
> Q. Would one year be an extensive period of time? A. No, it wouldn't.
>
> Q. Would two months be a short time? A. Extremely short."

Mr. Baron, Petitioner's employee and expert, testified as to the comparable testing of Petitioner's Grademaster (R. 152-153):

> "Q. In other words, they [Grademasters] have not been out in the field working? A. They have been working under test.
>
> Q. How long have they been working under test? A. I would say almost—no, approximately six months.
>
> Q. Approximately six months. A relatively short time? A. Day and night operation.
>
> Q. Oh, six months day and night operation? Does this give you an indication whether it will hold up? A. In a stone quarry, yes."

In a report on Utilo-Scope or Choremaster, a machine for performing functions similar to those of the machine of the patent, which the Petitioner's predecessor had attempted to develop in 1949, Mr. Knutson, Petitioner's former employee, had said (Exh. 17, R. 203):

> "A definite 'must' on any new machine would be a thorough, complete, rugged, exhaustive testing under

actual operating conditions, before the machine is released for manufacture or even before components are bought in quantities."

Mr. Knutson testified at trial (R. 197):

"Q. (Continued) I refer you to the statement, 'A definite must on any new machine,' and it continues on. Right after the numeral 12, do you have the part I am referring to? Do you recall in your—was that your honest opinion at the time you wrote it? A. That a definite must would be an exhaustive testing?

Q. Yes. A. Yes, it was.

Q. And do you consider that an exhaustive testing could be done in two or three months? A. Not really, no.

Q. Under what conditions would the testing have to be done? A. Under actual contractors' field conditions, the actual on-the-job work being performed.

Q. Would six months be an extensive test period? A. Possibly, if enough work was encountered.

Q. It depends upon the amount of work that the machine was doing? A. That's right.

Q. Night and day for six months, would that be a pretty good indication? A. Yes, it would. All depends upon the work performed."

Decision.

After setting out the facts in its opinion, the District Court noted the decision of Judge Bratton in *Merrill v. Builders Ornamental Iron Co.*, 197 F. 2d 16, at pp. 18-19 (10 Cir. 1952), and quoted a portion of the decision at 197 F. 2d 18 and 19 as follows:

"But an inventor's use of his device or apparatus for experimental purposes is not public use within the intent and meaning of the statute. A use necessarily open to public view is not a public use in the sense of the statute, if it is made in good faith solely for the

purpose of testing the qualities or operation of the invention. * * * The determinative factor is whether the use is made in good faith for purposes of experiment in testing the qualities and operation of the device or apparatus. [citing cases] * * * And use by an inventor in good faith for the purpose of testing his apparatus or device for experimental purposes is not public use within the scope of the statute, even though incidental to such use he derives some financial return. Good faith use of an invention for such purpose is not changed in character merely by the receipt of incidental profit or gain." (Appendix 17a.)

Immediately following the portion of the decision quoted by the District Court, the decision in *Merrill v. Builders Ornamental Iron Co., supra,* continues:

"But when use is shown more than the statutory period antedating the filing of the application for the patent, it is incumbent upon the patentee to show that such use was experimental only."

After quoting the decision in the *Merrill* case, *supra,* the District Court noted (Appendix 18a) the circumstances surrounding the use including the extent of the use, the changes and modifications resulting from the use, the complicated nature of the machine and the necessity of testing the machine and held:

"* * * a much longer period than the six-week spent on the Ravenna project '* * * could hardly be regarded as excessive for testing the function and utility of a rather complicated machine, newly conceived and newly constructed and for experimentation looking toward essential changes and adjustments.' Long Mfg. Co. v. Holliday, 246 F. 2d 95, 102 (4th Cir. 1957). We find no difficulty in holding that the use of the machine prior to May 15, 1943 '* * * may be properly characterized as substantially for the purposes of experiment.' Smith & Griggs Mfg. Co. v. Sprague,

123 U. S. 249, 256, 8 S. Ct. 122, 126, 31 L. Ed. 141 (1887), '* * * made in good faith * * * in testing the qualities and operation of the device or apparatus.' Merrill v. Builders Ornamental Iron Co., supra, 197 F. 2d at 19." (Appendix 19a.)

When setting forth its conclusions the District Court further stated, Appendix 43a, 44a:

"The defendant has failed to overcome the presumption of the patent's validity. This presumption is clearly stated in the cases and in the statute. 35 U. S. C. § 282; Admiral Corp. v. Zenith Radio Corp., 296 F. 2d 703 (10th Cir. 1961); Bewal, Inc., v. Minnesota Mining and Mfg. Co., 292 F. 2d 159 (10th Cir. 1961).

"Defendant has sought to overcome the presumption of validity by attempting to show: that the patent was in 'public use' for more than one year prior to the application; that the machine represented merely an aggregation of old elements disclosed in prior art; that the claims did not contain sufficient novelty and invention as to be patentable; and that the invention was not described with sufficient particularity as to enable one skilled in the art to construct the machine.

"Essentially, the Court has found against the defendant on each of these primary contentions.

"Although the invention saw some limited use for more than one year prior to the application, it was not in 'public use' within the intended meaning of 35 U. S. C. § 102(b)."

Petitioner did not request the District Court to reconsider its decision as to public use because of an alleged application of an improper presumption as to the patent's validity nor did petitioner argue to the Court of Appeals that any improper presumption of validity had been applied by the District Court. Moreover, the record contains

no evidence concerning the extent of use of Ravenna before May 15, 1943 except that some use was made, nor does the record contain any evidence of the minimum amount of testing which must be done to establish a reduction to practice of the invention. A public use in contravention to the statute cannot begin to run until an invention is reduced to practice by sufficient testing to show that the invention is capable of performing its intended function. *Coffin v. Ogden*, 85 U. S. (18 Wall.) 20, 21 L. Ed. 821 (1874). The burden of proving sufficient testing to establish a reduction to practice was Petitioner's.

ARGUMENT.

QUESTION NO. I.

A. NO UNSETTLED QUESTION OF FEDERAL LAW.

Question No. I does not involve an unsettled question of Federal Law but on the other hand involves a well settled and long established doctrine of law. In its first question Petitioner asks whether the long accepted and well established law of the *Elizabeth v. Pavement Co., supra*, is applicable today. This does not raise a question as to application of the law in this case, see *Crown Cork and Seal Co. Inc. v. Ferdinand Gutmann Co. Inc.*, 304 U. S. 159, 58 S. Ct. 842 (1938); *General Talking Pictures Corporation v. Western Electric Co.*, 304 U. S. 546, 58 S. Ct. 849 (1938), but only a question as to whether or not the law is applicable.

The *Elizabeth* case stated that the use of an invention in public for experimental purposes does not contravene the patent statutes and constitute a public use such as would bar an application for patent under 35 U. S. C. § 102(b) if the use occurred more than one year before the filing date of the application. At the time of the *Eliza-*

beth case, the statutes allowed two years before the application had to be filed.

The rule of the *Elizabeth* case was recognized and restated by this Court in *Smith & Griggs Mfg. Co. v. Sprague*, 123 U. S. 249, 8 S. Ct. 122, 31 L. Ed. 141 (1887) as follows:

> "A use by the inventor, for the purpose of testing the machine, in order by experiment to devise additional means for perfecting the success of its operation, is admissible; and where, as incident to such use, the product of its operation is disposed of by sale, such profit from its use does not change its character * * * The thing implied as excepted out of the prohibition of the statute is a use which may be properly characterized as substantially for purposes of experiment.
>
> * * * * *
>
> "On the other hand, the use of the invention by the inventor himself, or by another person under his direction, by way of experiment, and in order to bring the invention to perfection, has never been regarded in this court as such a public use as under the statute defeats his right to patent * * * In Elizabeth v. Pavement Co., 97 U. S. 126, 134, it was said: 'When the subject of invention is a machine, it may be tested and tried in a building either with or without closed doors. In either case, such use is not a public use, within the meaning of the statute, so long as the inventor is engaged, in good faith, in testing its operation. He may see cause to alter it and improve it, or not. His experiments will reveal the fact whether any and what alterations may be necessary. If durability is one of the qualities to be attained, a long period, perhaps years, may be necessary to enable the inventor to discover whether his purpose is accomplished. And yet he may be justly said to be

> using his machine only by way of experiment; and no one would say that such a use, pursued with a bona fide intent of testing the qualities of the machine, would be a public use within the meaning of the statute. * * * While the supposed machine is in such experimental use, the public may be incidentally deriving a benefit from it.'" 123 U. S. 256-258.

The experimental use doctrine was recognized by this Court as late as 1939 in *Electric Storage Battery Co. v. Shimadzu,* 307 U. S. 5, 59 S. Ct. 675; where *Elizabeth v. Pavement Co., supra,* was cited and it was stated at 307 U. S. 15 that a mere experimental use is not the public use defined by the Act.

There is no question but what the law of experimental use as expressed in *Elizabeth v. Pavement Co., supra,* is clearly in the public interest in that it encourages the perfecting and completion of an invention before a patent application is filed. If the rule were otherwise, inventors would be forced in many cases, where it is necessary to test the invention in public to determine whether or not it is capable of performing its intended function and accomplishing its purpose, to file patent applications before the invention has been proved useful or fully developed. Consequently, inventors would be forced to file incomplete disclosures, contrary to the purpose of the patent statutes and the Patent Office would receive an increased load resulting from applications on unproven inventions and an increased number of worthless "paper" patents would result. See comments of this Court concerning the filing and issuance of patents in *Graham v. John Deere Company of Kansas City,* 86 S. Ct. 684, 694 (1966).

The necessity of allowing an inventor to experiment was recognized in *Ushakoff v. United States,* 327 F. 2d 669 (Ct. Cl. 1964), at page 672:

> "On the other hand, the law has recognized the necessity of allowing an inventor to freely experiment with his invention and permits such experimental use which is reasonably necessary to the perfection of the invention * * * this exception has been recognized even in cases where the experimental use has resulted in incidental profit to the inventor."

It is respectfully submitted that Petitioner has shown no reason why this Court should grant certiorari to overrule the long established and accepted law on experimental use.

Moreover, Congress has given its tacit approval to this doctrine. Congress passed the Patent Act of 1952, 35 U. S. C., without showing any concern about the law in this field as delineated by the decisions of this Court. If Congress had felt that the decisions of this Court were contrary to public policy, as urged by Petitioner, the Patent Act of 1952 was a ready-made opportunity to change any such doctrines. Congress, however, did not see fit to change the law as enunciated by this Court.

Lower Courts Correctly Applied Law.

The District Court considered all of the evidence before it and found, as a finding of fact, that the use at Ravenna was experimental use and not public use. The court noted the extent of the use, the necessity for testing the machine of the patent, the facts with respect to changes which were made during testing period, the improvements which resulted from the testing period, and had before it the testimony of one of the inventors as to the character of the use at Ravenna (see above pp. 6-12). These are all factors which this Court noted in *Elizabeth v. Pavement Co., supra.* In that case, the invention involved a strip of pavement which was laid as a road to the entrance of a toll

gate and was used by users of the toll road for six years prior to the filing of the application. This Court noted the necessity of testing road pavement to determine its durability and capability of performing its function. It also noted that the road was observed during its use by the inventor and was in effect under his control. All the criteria noted by the *Elizabeth* case are present in the instant case except possibly the statement of a witness other than the inventor. However, in the instant case there is documentary evidence showing the structures which were used, the changes which were made, and the extent of the use (See above, p. 7). This evidence is undisputed.

This is not a situation similar to the *Barbed Wire Patent Case*, 143 U. S. 275 (1892), relied on by Petitioner as setting a standard for the type of evidence which should be present. In that case the structure which allegedly was in public use was disputed and only conflicting oral testimony was before the court. Obviously the case has no similarity to the present case.

Clearly the lower court cannot be said to have acted contrary to the decisions of this Court in finding experimental use.

The Petitioner argues that its Exhibit W, Sub-exhibit E, Appendix 70a, proves that the use was not experimental. Suffice it to say that the inventors in that paper merely stated that the Gradall did perform as required on that particular job and that the job could not have been done in the same period if the Gradall had not been there. This obviously does not mean that the use was not experimental or that the work could not have been done if the Gradall had not been there.

Not only did the lower courts correctly apply the law of experimental use but there can be no public use in contravention to the patent statutes until the invention is

reduced to practice by sufficient testing to show that the invention can perform its intended function and its capability of being used for its intended purposes. *Coffin v. Ogden, supra.* The burden of proving sufficient testing establish reduction to practice so that a public use could occur was Petitioner's. See *Lyon v. Bausch & Lomb Optical Co.*, 224 F. 2d 530 (2 Cir. 1955); *Aerovox Corp. v. Polymet Mfg. Corporation*, 67 F. 2d 860 (2 Cir. 1933).

No Conflict of Decisions.

In its Petition, pages 9-11, Petitioner apparently argues that there is a conflict among the lower courts concerning the law with respect to experimental use. Respondents have found no such conflict among the circuits and in fact, the Court of Customs and Patent Appeals has specifically commented upon the uniformity concerning this phase of the law. In *Application of Josserand*, 188 F. 2d 486 (C. C. P. A. 1951), the court, after discussing the facts in *Elizabeth v. Pavement Co., supra*, and noting the statement of this Court that any attempt to use the claimed invention for profit and not by way of experiment would deprive the inventor of his right to a patent, stated:

> "So far as we can determine from a study of all the judicial decisions found, the thoughts so expressed has been regarded uniformly by all Courts, which have had occasion to pass upon the question, as a correct statement of the law." (p. 493.)

The uniformity in the various circuits in following *Elizabeth v. Pavement Co.* is shown by the following decisions:

First Circuit: *Atlas v. Eastern Airlines, Inc.*, 311 F. 2d 156 (1962); *National Biscuit Co. v. Crown Baking Co.*, 105 F. 2d 422 (1959).

Second Circuit: *Lyon v. Bausch & Lomb Optical Co., supra; General Electric v. Minneapolis-Honeywell Regulator Co.*, 118 F. 2d 278 (1941).

Third Circuit: *Wilkie v. Manhattan Rubber Mfg. Co.*, 14 F. 2d 811 (1926).

Fourth Circuit: *Nicholson v. Carl W. Mullis Engineering & Mfg. Co.*, 315 F. 2d 532 (1963); *Long Mfg. Co. v. Holliday*, 246 F. 2d 95 (1957), cert. denied, 355 U. S. 926, 78 S. Ct. 384, 2 L. Ed. 357 (1958); *Thompson v. The American Tobacco Company*, 174 F. 2d 773 (1949); *Lanham v. Southern Bakeries Co., Inc.*, 198 F. Supp. 926 (D. C. N. Ga. 1960), aff'd 295 F. 2d 816 (1961).

Fifth Circuit: *Adams v. Columbus Manufacturing Co.*, 180 F. Supp. 921 (D. C. M. D. Georgia 1960).

Sixth Circuit: *Goodwin v. Borg-Warner Corporation*, 157 F. 2d 267 (6th Cir. 1946), cert. denied 329 U. S. 799.

Seventh Circuit: *Hobbs v. Wisconsin Power & Light*, 250 F. 2d 100 (1957), cert. denied 356 U. S. 932; *Barie v. Superior Tanning Co.*, 182 F. 2d 724 (1950); *Randolph v. Allis-Chalmers Mfg. Co.*, 120 U. S. P. Q. 522, 264 F. 2d 533 (1959).

Eighth Circuit: *Grand Rapids Showcase Co. v. Measuregraph Co.*, 28 F. 2d 497 (1928).

Ninth Circuit: *Cataphote Corp. v. De Soto Chemical Coatings, Inc.*, 235 F. Supp. 931 (N. D. Calif. 1964); *Kierluff v. Metropolitan Stevedore Co.*, 221 F. Supp. 830 (S. D. Calif. 1963); *Schmeiser v. Thomasian*, 227 F. 2d 875 (1955).

Cases Cited by Petitioner Not in Point.

The cases cited by Petitioner, Petition pp. 10, 11, for showing that there is nonuniformity in the application of the law of experimental use are not in point. The decisions did not involve the simple issue as to whether the use was experimental or mainly for profit. The patentees in the cases relied upon by Petitioner were arguing in each case that a secret use mainly for profit is not a public use. In fact, the court in *Huszar v. Cincinnati Chemical Works*, 172 F. 2d 6 (6th Cir. 1949), relied upon by Petitioner, noted that there was no allegation that the use for profit was experimental, only that it was secret.

In *Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F. 2d 516 (2nd Cir. 1946), also relied upon by Petitioner, it is clear that Judge Learned Hand was deciding the effect of a secret use for profit and not whether or not the use was experimental. Moreover, it is clear from a consideration of the decision in *U. S. Chemical Corp. v. Plastics Glass Corp.*, 243 F. 2d 892 (3rd Cir. 1957), cert. denied 357 U. S. 836 (1957), and from the decision of the District Court in the same case, 142 F. Supp. 840, that the issue again was primarily whether or not a secret use mainly for profit would bar a patent. In its Petition for Certiorari, Case No. 338, October 1957 Term, the appellant in *U. S. Chemical Corp. v. Plastics Glass Corp., supra,* directed its argument to the proposition that Judge Learned Hand's decision in the *Metallizing* case and the Court of Appeals' decision in that case should be overruled since a secret use mainly for profit was not a public use within the meaning of the Patent Statutes. While the question of experimental use versus use for profit was raised, the remainder of the petition only referred to the experimental use question to state that

experimental use would be argued if certiorari were granted.

From the foregoing, it is clear that Petitioner has not shown that the Second, Third and Sixth Circuits have views different from the other circuits on the question of experimental use. In fact, the situation in the present case is very similar to that in *General Electric v. Minneapolis-Honeywell, supra,* decided by the Court of Appeals for the Second Circuit.

No Constitutional Question Involved.

Petitioner suggests that any experimental use in public extends the monopoly contrary to the Constitution which provides the monopoly should be for limited times. Obviously the patent grant is limited to 17 years from the date of issuance of the patent and therefore is necessarily for a limited time. The inventor has no monopoly before the patent is granted. Moreover, under *Elizabeth v. Pavement Co., supra,* and the other cases involving experimental use, experimental use can only extend for that time reasonably necessary to perfect the invention. Consequently there can be no unlimited experimental use.

Conclusion as to Question I.

It is clear from the foregoing that the law as expressed in *Elizabeth v. Pavement Co., supra,* relative to experimental use is valid today and that it was properly applied in the instant case. Moreover, the rule must clearly be presumed to be within the intent of Congress since Congress did not attempt to modify or change the rule when it passed the 1952 Patent Act which codified existing law as well as changing the law in areas where Congress felt that the decisions of this Court were not in accordance with their intent.

QUESTION II.

There is no basis in the record for stating that the District Court applied a presumption of validity when deciding the issue of public use. Therefore, the issue raised by Petitioner in Question No. II is a purely hypothetical question. Moreover, the District Court would have been justified in applying a presumption of validity since Petitioner failed to establish that a *completed invention* was in "public use."

District Court Applied No Presumption.

In support of its position, Petitioner on page 14 of its Petition refers to the following language of the District Court:

> "The defendant has failed to overcome the presumption of the patent's validity * * * defendant has sought to overcome the presumption of validity by attempting to show: that the patent was in 'public use' for more than one year prior to the application * * *." (Appendix 43a-44a.)

The language upon which Petitioner bases its argument that the court applied a presumption is in the portion of the decision where the court states its general conclusions. The discussion of the issue of public use appears earlier in the decision at pages 15a-19a of the Appendix and it is clear from a consideration of this portion of the decision that the District Court did not apply a presumption in favor of Respondents.

The District Court, after stating the issue concerning public use at Appendix page 8a, concluded "After full consideration of the evidence" that "the use here falls within the rule of the Merrill case and does not contravene in the purpose of the statute." After stating this conclusion, the District Court continued (Appendix 18a) to review the

significant evidence which led to this conclusion, noting the time of the use, the circumstances of the use, the general problem involved with the machine, the other equipment utilized on the construction job, the necessity of testing a machine of this type extensively under actual working conditions, the absence of any evidence showing the use of this machine was a factor bargained for in letting the construction contract at the Ravenna Arsenal to the inventors of the machine, the showing that modifications were made during this period of use and the showing that the experience obtained from the use led the inventors to make additional modifications and improvements thereafter and the like.

After this review of the evidence, the District Court concluded:

> "We find *no difficulty* in holding that the use of the machine prior to May 15, 1943 '* * * may be properly characterized as substantially for the purposes of experiment.'" (Appendix 19a. Emphasis supplied.)

Clearly, then, the District Court found experimental use only after a full consideration of the evidence. Its statement that there was no difficulty in holding the use experimental clearly indicates that the District Court did not apply a presumption in arriving at its finding.

While Petitioner is arguing to this Court that a presumption was improperly applied in finding experimental use, Petitioner made no request for reconsideration after the District Court rendered its opinion.

Court of Appeals' Argument and Decision.

Not only did Petitioner fail to ask reconsideration of the District Court's opinion but Petitioner also failed to argue this point to the Court of Appeals for the Tenth

Circuit. While Petitioner did argue to the Court of Appeals that the finding of experimental use was unsupported by the evidence, at no time did Petitioner present an argument that the District Court had improperly applied a presumption of validity in finding that the invention had not been in public use. Moreover, it does not appear from the record that the Court of Appeals applied any presumption in finding experimental use.

Application of the Presumption of Validity Proper.

In presenting its argument in support of Question No. II, Petitioner assumes that the District Court found that the invention had been completed and then used in public some time between mid-March 1943 and May 15, 1943. Before an invention can be in "public use" within the meaning of 35 U. S. C. § 102(b), it must have been reduced to practice and a reduction to practice includes the testing necessary to show that the invention is capable of performing its intended function. *Coffin v. Ogden, supra; Aerovox Corporation v. Polymet Mfg. Corp., supra; Robinson on Patents* (1890), Vol. 1, § 318, p. 426.

There is nothing in the record of the instant case to establish that there was sufficient use of the invention between mid-March 1943 and May 15, 1943 to show that the invention was capable of performing its intended function and purpose prior to May 15, 1943. The record only shows that the machine was used for a six-week period between mid-March and mid-June and that the machine was down for about 25% of that time. Nor does the record support any argument that a test period of less than the six weeks would constitute a reduction to practice.

Clearly, then, the record in the instant case does not establish that there was sufficient testing before May 15, 1943 to constitute a completion of the invention. It was Petitioner's burden to show that the use before May 15, 1943 was sufficient to show that the machine was capable of performing its intended purpose and function and until this is shown, the presumption of validity accorded the statute is not overcome. See *Lyon v. Bausch & Lomb Optical Co., supra.* Consequently, the District Court would have been justified, on the record, in applying a presumption in favor of validity.

Conclusion as to Question No. II.

It is respectfully submitted that the record shows that no presumption was applied by the District Court in making its finding of experimental use but that the application of such a presumption would have been justified since the Petitioner failed to prove that a completed invention was in use before May 15, 1943.

It is respectfully submitted that the record of this case furnishes no basis for a grant of certiorari to review the law on presumptions of validity provided for by 35 U. S. C. § 282.

CONCLUSION.

For the foregoing reasons it is respectfully submitted that the petition for writ of certiorari should be denied.

Respectfully submitted,

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ANNEX A.

Claims 8, 9 and 16 from Patent in Suit, Exhibit 1.

8. Apparatus comprising a base, a boom mounted on said base for sluing, mechanism for sluing said boom, said boom having a base section and an extensible section telescopically mounted on said base section, mechanism to extend and retract said extensible section, an implement attached to the free end of said extensible section and having a working edge, said implement having a mounting on said extensible section including a linear pivot extending cross-wise of said boom, means for holding said implement in various positions about said pivot, said base section having a transverse pivotal mounting, mechanism for tilting said base section about said pivotal mounting, means mounting said base section for oscillation about an axis extending longitudinally of said boom, said extensible section being mounted non-oscillatably about said axis relative to said base section; and mechanism for oscillating said base section about said axis.

9. Apparatus comprising a base, an annular track having a horizontal pivotal mounting on said base, a telescoping boom having a base section and an extensible section slidable longitudinally of said base section, said base section having an annular bearing in said track so arranged that said base section of said boom is held against longitudinal movement relative to said annular track, power means operatively connected between said base and said base section of said boom for tilting said boom about said horizontal pivotal mounting, power means operatively connected between said base section and said annular track for oscillating said boom in said bearing about an axis longitudinal of said boom, mechanism operatively connected between said base section and said extensible section for

extending and retracting said extensible section of said boom, and an implement attached to the free end of said extensible section in fixed orientation about the longitudinal axis of said extensible section.

16. An apparatus of the character described having in combination a support, a platform pivotally mounted on said support, hydraulic means for rotating said platform acting between said platform and said support and operative through an angle of not less than 180 degrees of circular movement around its pivot, a telescoping boom comprising a base section and an extensible section, means mounting said base section on said platform for boom oscillation about an axis longitudinal of the boom, a horizontal pivot for said base section mounted on said platform, hydraulic means for tilting said base section about said horizontal pivot, hydraulic means for rotating said boom base section axially, hydraulic means for extending said extensible boom section, a material moving implement pivotally mounted on said extensible section, and means for moving said implement about its pivotal mounting.

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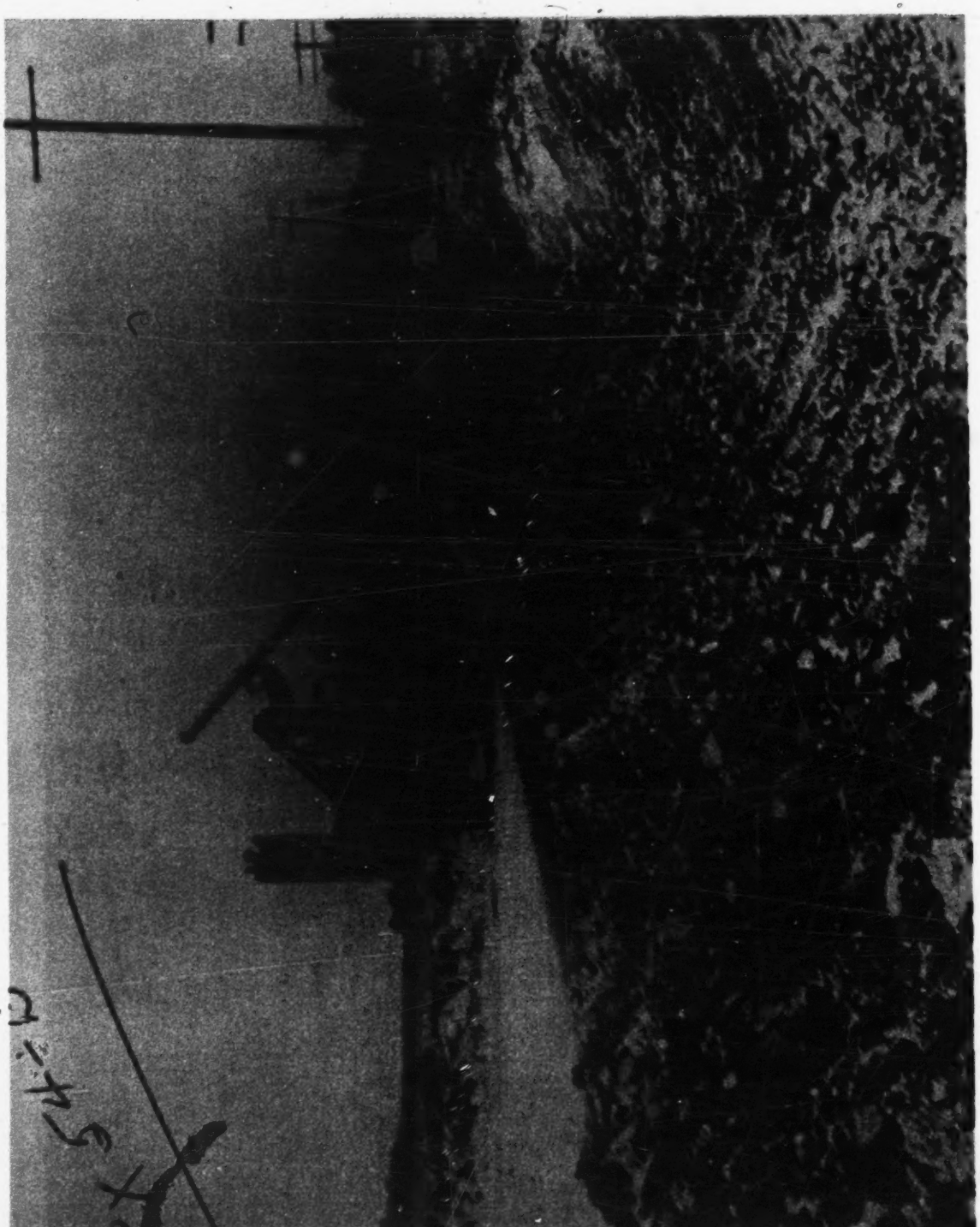
ANNEX B.

Exhibit 54-A, First Ferwerda Machine Applied in the Fall of 1942.

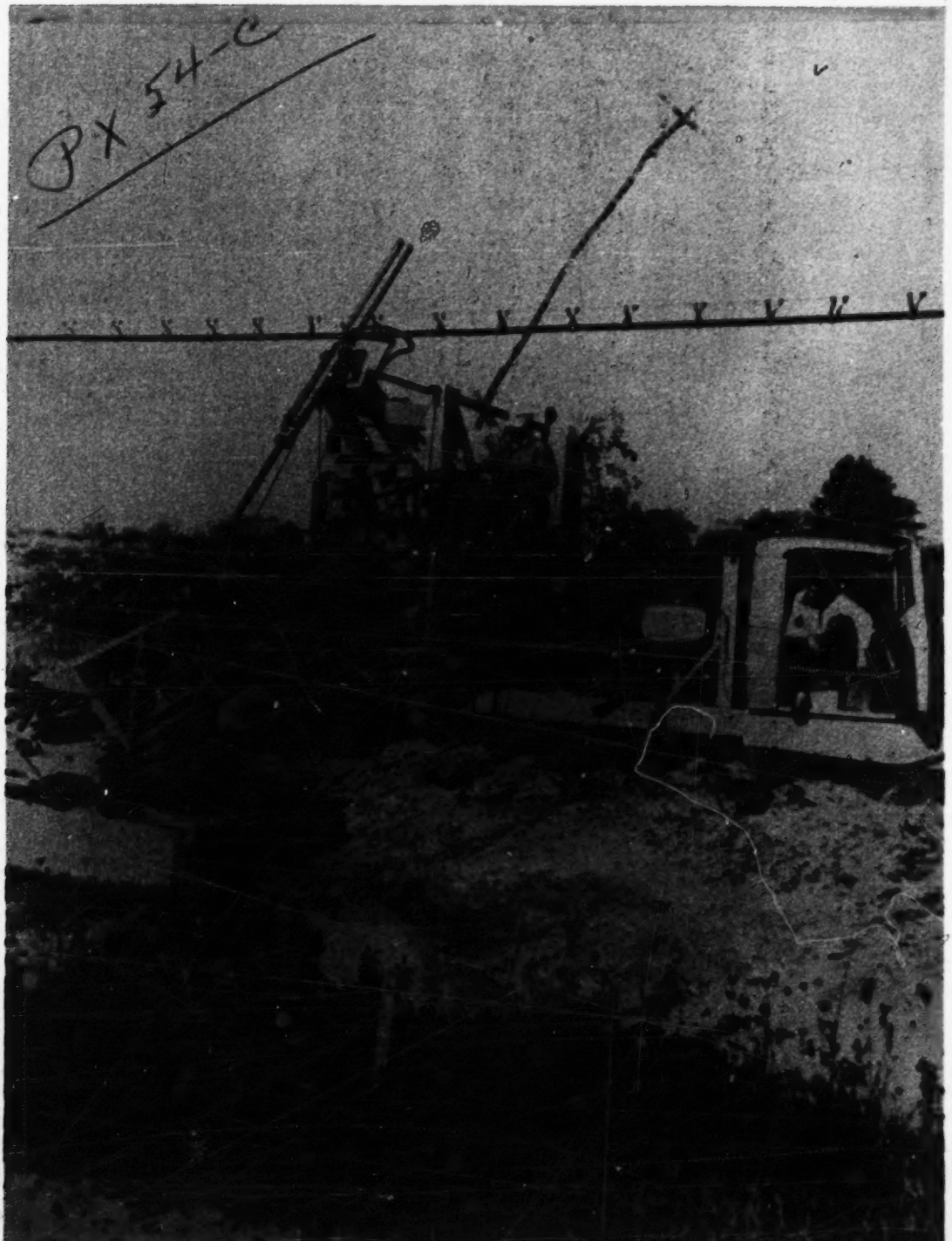
ANNEX C.

Exhibit 54-B, Ferwerda Machine as Originated at Ravenna.



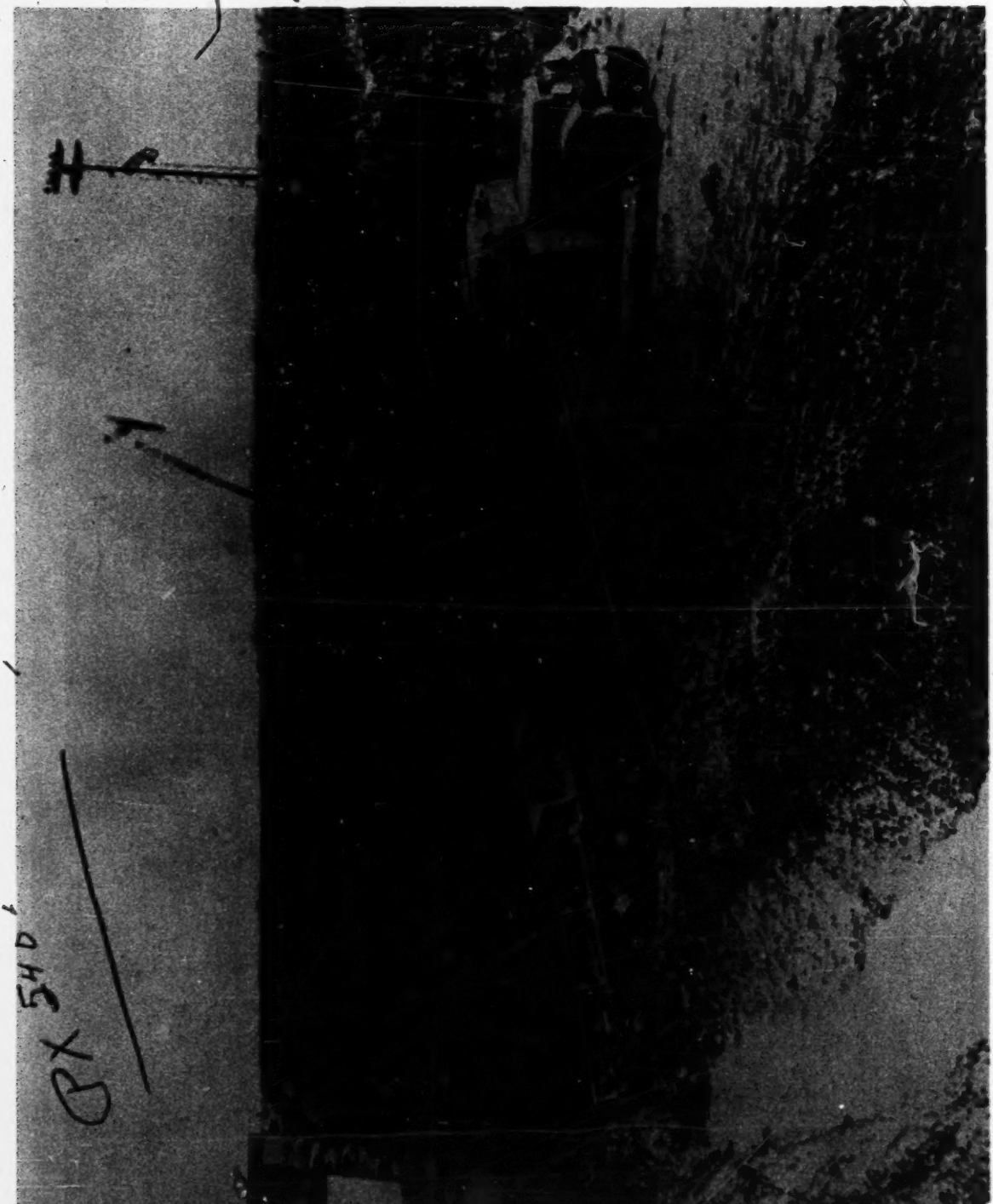
ANNEX D.

Exhibit 54-C, Ferwerda Machine at Ravenna with Base Edge.



ANNEX E.

Exhibit 54-D, Ferwerda Machine at Ravenna with Lift Cylinder Re-positioned.



ANNEX F.

Excerpts from Exhibit W, Interrogatories Concerning Structure of Ravenna Machine.

Q. 21. If the answer to Interrogatory 20 is yes, did the outer section have an annular bearing cooperating with an annular track?

A. The full details of the bearing mounting for the boom are not known except to state that the outer boom section was cantilevered at its rear end from the upper works of the machine by means of two parallel plates, one supported by the boom, the other supported by the carrier, and one of the plates carried a central hub cooperating with a hole in the other plate.

Q. 22. If the answer to Interrogatory 21 is yes, did the annular bearing cooperate with the annular track to prevent longitudinal movement of the outer section?

A. The manner in which the boom was limited against longitudinal movement is not known but it is believed to have involved retaining means associated with the hub.

Q. 23. If the answer to Interrogatory 21 is no, what structure was incorporated for rotatably mounting the outer section of the boom for rotation about its longitudinal axis?

A. See the answer to Interrogatory 21.

Q. 24. If the answer to Interrogatory 6 is yes, did the machine illustrated in Exhibits A, B, C and D have a boom which was raised and lowered by hydraulic means?

A. Yes.

Q. 25. If the answer to Interrogatory 20 is yes, did the machine illustrated in Exhibits A, B, C and D have hydraulic means for rotating the outer section of the boom about its longitudinal axis?

A. Yes.

Q. 26. If the answer to Interrogatory 6 is yes, could the blade or working tool mounted on the end of the boom be moved about an axis extending transversely of the boom?

A. No.

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IN THE

Supreme Court of the United States

OCTOBER TERM, 1965

No. 1092

UNIVERSAL MARION CORPORATION,

Petitioner,

vs.

THE WARNER & SWASEY COMPANY, et al.,

Respondents.

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

PETITIONER'S REPLY TO RESPONDENTS' BRIEF IN OPPOSITION

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Respondents, on page 19, state that the cases cited by petitioner on pages 10 and 11 of its Petition are not relevant to show non-uniformity of the several circuits in applying the *law of experimental use*. Respondents' argument misses the target. Petitioner's Question I is more basic than this and concerns itself with whether the legal principles as expressed in *Elizabeth* v. *Pavement Co.*, 97 U. S. 126 (1877) are applicable today for determining whether a prior nonsecretive commercial, competitive use of an invention is or is not a "public use" within the meaning of 35 U. S. C. § 102(b).

This Court in *Elizabeth* v. *Pavement Co.*, *supra*, created a judicial exception to 35 U. S. C. § 102(b) by holding that a prior public use of an invention does not fall

within the prohibition of the statute if such use is experimental. Some Courts of Appeals, when presented with a question of public use, have cited and applied the rule of *Elizabeth* to avoid the invalidating effect of the statute. Other courts have considered prior uses which previously were not considered public within the meaning of 35 U. S. C. § 102(b) as, in fact, being such if they amount to a competitive exploitation of the invention.

The Court of Appeals for the Second Circuit in *Metallizing Engineer Co.* v. *Kenyon Bearing & A. P. Co.*, 153 F. 2d 516 (1946), *cert. denied* 328 U. S. 840 (1946) held that the sale of a product made by a secret process amounted to a competitive exploitation of the secret process and thus the process was "publicly used" within the meaning of 35 U. S. C. § 102(b). It found such use of the process to be in violation of the statute even though the public could not ascertain from an examination of the product the process by which it was produced. The broad application of this holding, irrespective of the secrecy or non-secrecy of the use, has effected at least a partial erosion of the doctrine established by the *Elizabeth* case as under the *Metallizing* case, any competitive exploitation of an invention outside the one-year period provided for in the statute results in a forfeiture of any patent rights under § 102(b) regardless of the secret or experimental nature of the activity. The third and sixth circuits in *U. S. Chemical Corp.* v. *Plastics Glass Corp.*, 243 F. 2d 892 (3 Cir. 1957), *cert. denied* 357 U. S. 836 (1957) and *Huszar* v. *Cincinnati Chemical Works*, 172 F. 2d 6 (6 Cir. 1949) have followed the rule of the *Metallizing* case.

Respondents refer to limited claims of the patent in suit and state that the machine used one year prior to filing of the application for patent did not include certain specific features called for in *these* claims. Such argument is *not* applicable to the broad claims. (See claim 6, for example, p. 68a.) The specific features of the limited

claims are however minor; and it is clear that the machine used more than one year *prior* to the time the patent application was filed did, in fact, have all of the features of the broad claims involved in this suit and that the machine anticipated the "invention" or asserted patentability attributable to the machine. In this regard, the District Court did find that there was a "limited use" of the "*invention*" (emphasis added) more than one year prior to the filing of the patent application (p. 44a). This being the case, the broad claims should be held invalid under 35 U. S. C. §102(b) and the subject matter of these claims should constitute "prior art" for invalidating the specific claims.

It is submitted that this Court should review the law of prior public use because of the importance of this doctrine in the administration of the patent system.

CONCLUSION

For the reasons stated herein and in the Petition for Writ of Certiorari, such Petition should be granted.

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SUPPLEMENTAL BRIEF OF RESPONDENTS
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Metallizing Engineering Co. v. Kenyon Bearing & A. P. Co., 153 F. 2d 516 (2nd Cir. 1946), did not effect an erosion of the doctrine of *Elizabeth v. Pavement Co.*, 97 U. S. 126 (1877), as contended by Petitioner on page 2 of the reply brief.

Elizabeth v. Pavement Co., supra, and this Court's decision in *Smith & Griggs Mfg. Co. v. Sprague,* 123 U. S. 249 (1887), clearly state that any use mainly for profit is not an experimental use. This is all that the *Metallizing* case decided in so far as the question of experimental use is concerned.

The District Court in the *Metallizing* case, 62 F. Supp. 42, 55-56, noted that incidental profit or benefit would not change the character of an experimental use. This is the holding of *Elizabeth v. Pavement Co.* The District Court, however, then found that the use by the patentee was mainly for profit thereby taking the use out of *Elizabeth v. Pavement Co., supra,* and into *Smith & Griggs Mfg. Co. v. Sprague, supra.*

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On appeal, Judge Learned Hand expressly approved these findings, 153 F. 2d 516, and then dealt with the patentee's contention that a use mainly for profit is not a public use provided the use is kept secret. It is in this reference that Judge Learned Hand spoke of competitive exploitation and not in the sense that incidental profit or benefit would, contrary to the doctrine of the *Elizabeth* case, destroy the character of a use which was otherwise experimental.

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